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MR. FREDERICK ALGAR, Nos. 11 and 12 Clements Lane, Lombard Street, London, E. C., England, is the authorized European Agent for the JOURNAL.

MR. JAMES J. WHITE, Ottawa, Canada, writer of "Our Canadian Letter," acts as agent for the AMERICAN RAILROAD JOURNAL COMPANY, in Canada. He is authorized to receive, in behalf of the company, subscriptions and advertisements for this journal; also news of the character which he can utilize in the preparation of his Letter, or send to us for use elsewhere within these columns. He respectfully invites information concerning Railroad matters generally, Mining, Banking, Finance and Manufactures.

ALL correspondence, communications and contributions intended for publication should be addressed to the "Editor of the AMERICAN RAILROAD JOURNAL." Business letters, subscriptions, orders for copies and advertisements should be sent to the "AMERICAN RAILROAD JOURNAL CO."

We invite railroad officers to send us notice of elections, transfers, appointments, resignations, etc.; and all our readers would oblige us by furnishing us with any items of news which may come to their knowledge, and are of a suitable nature for our columns. It is our intention to publish weekly full and accurate information regarding those enterprises and industries to which the AMERICAN RAILROAD JOURNAL is devoted, and to effect this end we solicit the co-operation of readers interested therein. We aim specially to record all new railway enterprises in the United States and Canada, and to note the progress of construction on all new roads and extensions; and we request those concerned in railway building to give us early information concerning the above, that our reports may be as complete as possible.

Correspondence and contributed articles are also requested for our special departments devoted to Finance, Commerce, Street Railways, and New Inventions. All communications should bear the name and address of the writer, not necessarily for publication, but to insure the editor's attention.

ANOTHER IMPROVEMENT.

WITH this number the AMERICAN RAILROAD JOURNAL is enlarged by a further addition of four pages, giving it a total of thirty-two pages weekly, exclusive of the cover. It was our intention to postpone this enlargement until arrangements had been perfected for the establishment of an Insurance Department, but the increasing number of our advertisers and the consequent pressure upon our editorial and news columns compels us to make the addition sooner than contemplated. We consider the interests of our readers as paramount, and should the number of advertisements sent to the JOURNAL continue to increase, higher advertising rates will be the next step taken to prevent the exclusion of reading matter. Another enlargement of the JOURNAL will not be practicable for some time to come, and we know of no other way in which to show justice to both readers and advertisers than by increasing our terms for advertising.

The AMERICAN RAILROAD JOURNAL is now one of the largest and best conducted railway publications in the world, as well as the oldest and most attractive in appearance. Its present interior form will be permanently adopted, and in a few weeks our new feature, the Insurance Department, will be established. Minor improvements will be introduced from time to time as occasions present themselves, for we are not so conservative as to adhere to old customs simply because they are old, and have little else to recommend them. The present form of the JOURNAL and the sequence of its departments have been adopted as the most convenient for our readers as well as beneficial to our advertisers, and will be maintained unless a better arrangement suggests itself. The JOURNAL will be mailed to subscribers on Friday afternoon of every week reaching the majority of them on Saturday, the date of publication, unless unavoidable and unseen delays interfere,

which is a frequent possibility with every weekly publication. Its Financial, Commercial and News Departments, and the editorial and statistical pages are the last put in type, in order that they may convey the latest intelligence with appropriate comment, and opportunity is reserved to give room to any article, note or communication on matters of special interest until the final moment of going to press.

In less than a month the AMERICAN RAILROAD JOURNAL is one-third enlarged from its former size, and thoroughly and systematically remodeled, and we trust its readers will recognize the fulfilment of promises made in these columns some weeks ago, and credit us with being severely in earnest in our efforts to increase the JOURNAL's sphere of usefulness and enlarge its field of operations.

THE FIVE CENT FARE BILL.

GOVERNOR CLEVELAND'S veto of the bill reducing the fare on the elevated roads in this city to five cents is to us as gratifying as it is unexpected. Popular clamor for the passage of this measure had been so great that we doubted if Governor CLEVELAND, with all his just and impartial views on questions of legislation, would be able to withstand the pressure brought to bear upon him, and that he has done so is a convincing proof that the people of New York made no error in electing him to his present position.

As might be expected, the Governor based his disapproval of the bill solely upon legal and constitutional grounds. His veto message to the legislature was lengthy and exhaustive, and in every respect an admirable document, which viewed the measure in a light of strict impartiality. It dwelt first upon the history of the elevated roads, tracing them from their inception to the present time, and subsequently pointed out the obligations of the State to fulfill their part of the contract irrespective of

alleged irregularities and infractions of the roads themselves, until proper and legal examination of their conduct had been made as required by the provisions of the general railroad act.

We have not the space to quote in full the text of the Governor's veto, but reprint such portions as should fully justify his disapproval of the measure in the minds of all fair and impartial persons. In citing the concessions made to the elevated roads by the State, and the various laws passed regulating their immunities and privileges, he says:

"Another act was passed in 1875, commonly called the Rapid Transit act, which provided for the appointment of commissioners, who, among other things, were authorized to fix and determine the time within which roads subject to the provisions of the act should be completed, together with the maximum rates to be paid for transportation and conveyance over said railways and the hours during which special cars should be run at reduced rates of fare. Commissioners were duly appointed by the Mayor of the city of New York, as provided by this act, who fixed and determined the route of the road of the New York Elevated Railroad Company, and prescribed with the utmost particularity the manner of its construction, and thereupon deliberately agreed with said company that it should charge as fare upon trains and cars other than what were called by the parties commission trains and cars, for all distances under five miles not to exceed ten cents, and not to exceed two cents for each mile or fraction of a mile over five miles until the fare should amount to not exceeding fifteen cents for a through passenger from and between the Battery and the intersection of Third avenue and 129th street, and from and between the Battery and High Bridge not to exceed seventeen cents for a through passenger, and that for the entire distance from and between the Battery and Fifty-ninth street the fare should not exceed ten cents per passenger. It was further agreed between the said company and the Commissioners that commission trains should run during certain hours in the morning and evening for the accommodation of the public and the laboring classes, upon which the fare should not exceed five cents from and between the Battery and Fifty-ninth street, nor any greater sum for any distance not exceeding five miles; that it should not exceed seven cents for a through passenger from and between the Battery or any point north thereof and the Harlem River, and that such fare should not exceed eight cents on such commission cars and train from and between the Battery and High Bridge. And it was further agreed by said company that when the net income of the road, after all expenditures, taxes and charges are paid, should amount to a sum sufficient to pay exceeding ten per cent per annum on the capital stock of the company, that in such case and within six months thereafter, and so long as net earnings amount to a sum sufficient to pay more than ten per cent aforesaid, the said company would run commission trains on its road at all hours, during which it should be operated at the rates of fare last mentioned. Having thus completed an agreement with this company, the Commissioners transmitted the same to the Mayor of the city of New York, accompanied by a very congratulatory report of their proceedings, whereupon the Mayor submitted the same to the Board of Aldermen, by whom it was approved. This was in the latter part of the year 1875. Since that time the New York Elevated Railway Company, upon the faith of the laws which have been recited, and its proceedings with the Commissioners, at a very large expense has completed its road from the Battery to Harlem River, a distance of about ten miles. The bill before me provides that notwithstanding all the statutes that have been passed and all that has been done thereunder passengers shall be carried the whole length of this road for five cents, a sum much less than is provided for in any of such statutes or stipulated in the proceedings of the Commissioners."

No clearer exposition of the obligations of

the State could be desired. The elevated roads have adopted rates of fare lower than their contracts with the State demanded, yet notwithstanding this fact, an arbitrary law is passed making a still further reduction without the slightest shadow of fairness or legality. Regarding the alleged watering of stocks and excess of profits made by the roads the Governor points out the proper course of action for the State, under its own laws as follows:

"I am of the opinion that in the legislation and proceedings which I have detailed, and in the fact that pursuant thereto the road of the company was constructed and finished, there exists a contract in favor of this company, which is protected by that clause of the constitution of the United States which prohibits the passage of a law by any State impairing the obligation of contracts. But let it be supposed that this is not so, and that neither of these lesser companies are in any way protected from interference with their rates of fare, but, on the contrary, they are subject to all the provisions of the general railroad act under which they are both organized. Section 33 of that act reads as follows:—'The Legislature may, when any such railroad shall be opened for use, from time to time alter or reduce the rate of freight, fare or other profits upon said road. But the same shall not without the consent of the company be so reduced as to produce with said profits less than ten per cent per annum on the capital actually expended; nor unless on an examination of the amount received or expended, to be made by the State Engineer and Surveyor and the Controller, they shall ascertain that the net income derived by the company from all sources, for the year then last past, shall have exceeded an annual income of ten per cent upon the capital of the corporation actually expended.' Even if the State has the power to reduce the fare on these roads, it has promised not to do so except under certain circumstances and after a certain examination. I am not satisfied that these circumstances exist, and it is conceded that no such examination has been made. The constitutional objections which I have suggested to the bill under consideration are not, I think, removed by the claim that the proposed legislation is in the nature of an alteration of the charters of these companies, and that this is permitted by the State constitution and by the provisions of some of the laws to which I have referred. I suppose that while the charters of corporations may be altered or repealed, it must be done in subordination to the constitution of the United States, which is the supreme law of the land. This leads to the conclusion that the alteration of a charter cannot be made the pretext for the passage of a law which impairs the obligation of a contract.

This portion of the veto teaches a wholesome lesson to the Legislature. It has been a common practice for that body to overstep the limit of its powers, and endeavor to assume the triple role of law-maker, judge and jury. The Senate and Assembly are not judicial nor executive bodies, their duties being purely legislative, yet this fact is commonly ignored in measures passed in compliance with public opinion. The veto concludes with what might be called this justly merited reproof:

It is manifestly important that invested capital should be protected, and that its necessity and usefulness in the development of enterprises valuable to the people should be recognized by conservative conduct on the part of the State government. But we have specially in our keeping the honor and good faith of a great State, and we should see to it that no suspicion attaches, through any act of ours, to the fair fame of the Commonwealth. The State should not only be strictly just, but scrupulously fair, and in its relations to the citizen every legal and moral obligation should be recognized. This can only be done by legislating without vindictiveness or prejudice, and with a firm determination to deal justly and fairly with

those from whom we exact obedience. I am not unmindful of the fact that this bill originated in response to the demand of a large portion of the people of New York for cheaper rates of fare between their places of employment and their homes, and I realize fully the desirability of securing to them all the privileges possible, but the experience of other States teaches that we must keep within the limits of law and good faith, lest in the end we bring upon the very people whom we seek to benefit and protect a hardship which must surely follow when those limits are ignored.

The justice of Governor CLEVELAND's allusion to "vindictive legislation" was fully exemplified in a speech made in the Assembly by Mr. ROOSEVELT, of this city, after the reading of the message. This speech was a remarkable one, and cannot serve to benefit Mr. ROOSEVELT's reputation as a statesman, but it at least credits him for an honesty not possessed by many of his fellow legislators. He said it was with shame that he had to admit to his brother Assemblymen that when he voted for the passage of the Five Cent Fare bill he compromised with his own convictions. It was the first time in his whole public career he had cause to regret his vote. He was induced to vote for the bill, he said, in a spirit of revenge and vindictiveness against "the thieves" who managed the elevated roads. On the constitutionality of the bill he had profound doubts, but still he had been led to vote for the bill in order "to administer a lesson to Jay Gould, who had done more than any other man or class of men to debauch the public mind with his hired newspapers and his subsidized judges. It is not a question of doing right by Mr. GOULD and his associates," said Mr. ROOSEVELT, "for they are thieves. They sent up a petition here against the bill, signed by Mr. GOULD and others. If a petition had been sent up by BILLY McGLOTHY and OWNEY GOGHEGAN it would have had as much force with me. They belong to what I call the wealthy criminal class, and are to be watched if the interests of the commonwealth are to be protected."

This speech, confessing as it did inexcusable weakness and unfitness for legislative duties on the part of the speaker, nevertheless possessed the ring of truth and exposed the animus which led to the passage of the bill by the majority of the Senators and Assemblymen. It was not a measure prompted by high motives for public welfare, but simply a blow at capital as personified by GOULD, VANDERBILT and FIELD. The machinery of legislation was set in motion not to enact broad and public spirited laws, but to crush a handful of men who are unfortunate enough to possess vast wealth. Such is the result of anti-corporation warfare masquerading under the guise of anti-monopoly.

We rejoice that Governor CLEVELAND has possessed sufficient firmness and independence

to withstand the pressure of misguided public opinion; that this mean-spirited attack on corporations has met with a stinging repulse, and above all that this repulse is made by a Governor against whose personal integrity and manly freedom from corporation influence the most ardent supporter of the bill has dared not breathe a word.

If the elevated roads have watered their stock and practised illegalities, let them answer for it before the courts as might private individuals for similar unlawful acts. This course of action is suggested by Governor CLEVELAND in a passage of the veto that we have not space to quote at length, wherein he remarks: "I am not aware that the corporations have by any default forfeited any of their rights, and if they have, the remedy is at hand under existing laws." This sentence alone conveys the whole pith and substance of his disapproval.

The loud predictions made by the promoters of the bill that it would be passed over the Governor's veto have not been fulfilled. The measure was brought up for consideration in the Assembly on Wednesday last, and despite the large majority by which it was originally carried the veto was sustained by a vote of 66 to 58. The members have awakened to a sense of their unjust error, and the people's cause has not been benefitted by that wretched bungling measure, the Five Cent Fare Bill, whose fate is now oblivion.

THE LATEST ANTI-MONOPOLY ISSUE IN NEW JERSEY.

THE bill introduced in the New Jersey Legislature compelling a reduction of tolls on the Plank Road between Newark and Jersey City, was smothered in the Assembly last week by a tie vote. In view of the opinion of the State Attorney General that the bill was not properly advertised as required by law, and that the contemplated measures partook of the nature of special legislation, which would be declared unconstitutional in the courts, it is perhaps well that the New Jersey legislators have avoided a blunder that would result in self stultification but the Jersey press are none the less loud in their assertions of corruption and bribery on the part of those Assemblymen who voted against the bill.

The Pennsylvania Railroad has a controlling interest in the Plank Road Company, and this reason alone is sufficient to bring down upon the friends of the latter the anathemas of the staid Jerseymen, for the Pennsylvania Road is a bugbear to the citizens of our sister commonwealth. But these same citizens are oblivious to the fact that upon them primarily rests the responsibility for their own misfor-

tunes. In bye-gone days, New Jersey always lent a willing ear to the seductive voice of monopoly, granting extraordinary charters with a lavish hand, and now she is beginning to reap the harvests of her own imprudence. The very same Pennsylvania Railroad or rather its predecessors and lessor in the State, the New Jersey Railroad and Transportation Company was met at the outset of its career by powerful monopolies who strive to check its construction and bar its progress by every obstacle within their reach. The good people of Jersey, or rather to speak more correctly, the people of good Jersey seem to forget that in order to construct bridges across the Passaic and Hackensack Rivers, the New Jersey Railroad was compelled to buy out the stock of certain Bridge and Turnpike Companies who had been given by the State the exclusive privileges of erecting bridges across navigable streams within her borders. The New Jersey Railroad and its successor the Pennsylvania, having been forced into this purchase, it is but just and natural that they should make a hard fight to maintain possession of the property when it has acquired unexpected value. Had the New Jersey Railroad been allowed to construct its own bridges at the inception of the organization nearly fifty years ago without the opposition of monopolies, the present condition of affairs would not have arisen. There is an ancient maxim which speaks of the making of beds and their occupation thereafter, and the people of New Jersey have been their own chambermaids.

Let it be thoroughly understood that we do not defend monopolies of any kind or description, but are merely reminding the people of New Jersey that upon them are being visited the sins of their political forefathers. If they can obtain legitimate relief in their present difficulties we will cordially rejoice at the success of their efforts, no matter what monopoly may suffer in consequence, but let them remember that it is a poor rule that won't work both ways. In the days gone by they have sown of the flesh and now are reaping corruption.

Regarding the alleged bribery of members of the legislature, if true, it was a disgraceful proceeding, and we sincerely hope its investigators and abettors will shortly find their way within the walls of State's Prison, where they may receive some valuable instruction in questions of finance from the large and influential numbers of prominent but misguided Jersey financiers who being unable to comprehend the distinction between *meum* and *tuum*, have found the atmosphere of Trenton best suited to their peculiar temperament. But a thought strikes us here that this constant hue and cry of

"bribery and corruption" has a demoralizing effect upon State reputation. If wicked, sinful railroads will resort to dishonest means in order to carry out their private measures they are forced to seek affiliation with wicked, sinful legislators to effect such ends, and the people of New Jersey, or of any State can thwart their occult and evil schemes by electing honest representatives. Prevention as well as remedy is in their own hands, and if in spite of all their efforts, dishonest Jerseymen still outnumber the honest in New Jersey's legislative halls it can only be for the same reason that white sheep give more wool than black—because there are more of the former in existence.

EDITORIAL NOTES.

THE River and Harbor Improvement Bill was passed in the House of Representatives on Friday of last week, by a vote of 112 to 90, but the corrupt appropriation was subsequently strangled in the Senate, that body postponing its consideration and thus effectually disposing of the measure. So the Forty-seventh Congress goes out with the same unsavory odor permeating its actions that has assailed the public nostrils since its organization. Doubtless there have been weaker and more corruptible legislative bodies than this Congress, but their name is not legion. Speaker KEIFER never spoke more truly than when in his closing address to the House he declared that "in a moment more this House of Representatives will be known only in history." Certainly they will not be known in their good works. The future career of the distinguished jobbers who for two years have treated legislation as a national plaything is not difficult to determine. In the language of the *Hon. Bardwell Slote*, as personated by the eminent comedian, Mr. FLORENCE, they will go down to their graves "unhonored and unhung."

We publish this week in our news columns the names of the commissioners and officers of the National Exposition of Railway Appliances to be held in Chicago in May, together with the list of premiums for articles exhibited in Department A, devoted to Rolling Stock. The remainder of the premium list will be published next week. Mr. E. H. TALBOTT, the Secretary, writes us from Chicago as follows:

"I have read with pleasure the article in your Street Railway Department, and am much pleased that you are disposed to render the Exposition so much friendly support. The railway journals of the country certainly ought to give this important undertaking their most earnest and persistent support, and I am pleased to note that most of them are doing so. You may rest assured that the Exposition will be a magnificent success. The applications already received, and the preparations already being made, leave no doubt upon this point. The trouble which already stares us in the face is how to take care of all that is likely to be brought."

NEWS DEPARTMENT.

[Items of information suitable for this department and especially those adapted for the columns devoted to the Organization, Incorporation, Construction and Consolidation of Railways, are earnestly desired from our readers.]

Officers and Premium List of the National Railway Exposition.

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PREMIUM LIST.

DEPARTMENT A—ROLLING STOCK.

CLASS NO. 1—LOCOMOTIVES.

Best Display of Locomotives.....Grand Gold Medal
" Standard Gauge Passenger....."
" Narrow Gauge Passenger....."
" Standard Gauge Freight....."
" Narrow Gauge Freight....."
" Switching....."
" Logging and Mining....."
" Locomotive Involving Important New Principles....."
" Locomotive Balance.....Bronze"
" Locomotive Clock....."
" Steam Gauge Cook....."
" Stop Cook....."
" Engineer's Torch....."
" Locomotive Gong....."
" " Headlight (to Burn Oil)....Gold"
" " Headlight (Electric)....."
" Steam Gauge.....Silver"
" Water.....Bronze"
" Gauge Test Pump....."
" Grate Bar.....Silver"
" Engineer's Hammer.....Bronze"
" Injector.....Silver"
" Locomotive Pump....."

" " Stack....."
" " Jack....."
" " Bell....."
" Oil Cup.....Bronze"
" Locomotive Oil....."
" Oil Set.....Silver"
" Headlight Reflector....."
" Coal Scoop.....Bronze"
" Water Gauge Glass....."
" Wire Cloth....."
" Cab Lamp....."
" Locomotive Safety Valve.....Silver"
" Steam Muffler....."
" Boiler Feeder....."
" Spark Arrestor.....Gold"
" Smoke Consumer....."
" Device to Prevent Slipping of Wheels.....Silver"
" Steam Whistle....."
" Locomotive Steel Tire.....Gold"

CLASS NO. 2—CARS.

" Display of Cars.....Grand Gold"
" Private or Officer's....."
" Hotel....."
" Dining....."
" Sleeping....."
" Drawing-room....."
" Day....."
" Mail....."
" Baggage.....Silver"
" Refrigerator.....Gold"
" Stock....."
" Box.....Silver"
" Flat or Gondola....."
" Coal, Ore or Gravel Dump....."
" Wrecking....."
" Road or Section Master's....."
" Hand....."
" Velocipede....."
" Steam Inspection....."
" Combination Stock and Freight.....Gold"
" Tank Car.....Silver"

CLASS NO. 3—RUNNING GEAR.

" Steel Axle (Master Car Builder's Standard).....Silver"
" Iron Axle (Master Car Builders' Standard)....."
" Hollow Axle....."
" Passenger Train Brake.....Gold"
" Brake Shoe.....Silver"
" Springs (Elliptic).....Gold"
" Springs (Spiral).....Silver"
" Springs (Bearing)....."
" Springs (Buffer or Draw).....Bronze"
" Springs (Rubber).....Silver"
" Equalizing Spring....."
" Draw Bar for Freight Car....."
" Journal Box....."
" Journal Box Lid....."
" Journal Bearing....."
" Steel Tire for Car Wheels.....Gold"
" Steel Tire Metal Wheel....."
" Cast Iron Wheel....."
" Steel Tire Combination Wheel....."
" Car Step.....Bronze"
" Passenger Car-Platform, Coupling and Buffer.....Gold"
" Passengers Car Six-Wheel Truck....."
" Passenger Car Four-Wheel Truck....."
" Freight Car Truck....."
" Automatic Freight Car Coupling.....Silver"
" Freight Car Coupling (Non-Automatic)....."

CLASS NO. 4—INTERIOR FURNISHINGS FOR PASSENGER CARS.

Best Display.....Gold Medal
" Bell Cord Fixtures, complete.....Silver"
" Bell Cord.....Bronze"
" Car Door Butts....."
" Car Door Latch (Saloon)....."
" Car Door Lock....."
" Seat End.....Silver"
" Seat End Lock.....Bronze"
" Seat End Fixtures....."
" Curtain Goods.....Silver"
" Curtain Roller.....Bronze"
" Curtain Rod Fixtures....."
" Deck Light Catch....."
" Display of Car Lamps.....Gold"
" Center Lamp (one burner).....Silver"
" " (two burners)....."
" " (three burners)....."
" " (four burners)....."
" Electric Light for Cars.....Gold"
" Postal Car Lamp.....Silver"
" Slide Lamp....."
" Door, Window and Deck Glass (Illuminated)....."
" Heater.....Gold"
" Stove.....Silver"
" Head Lining (Cloth)....."
" Head Lining (Wood)....."
" Hopper....."
" Urinal....."
" Window Lift.....Bronze"
" Sash Lock....."
" Deck Light Opener....."
" Decorating Material.....Silver"
" Sash.....Bronze"
" Window Blind....."
" Window Blind Lift....."
" Sash Spring....."
" Sash Stop....."
" Seat Frame.....Silver"
" Upholstering....."

" System of Ventilation.....Gold"
" Dust Guard.....Bronze"
" Display Fancy Woods and Veneers.....Gold"
" Water Cooler.....Bronze"
" Berth and Seat Springs.....Silver"
" Berth Curtain Hook and Fixtures.....Bronze"
" Wash-room Pump.....Silver"
" Cooking Range....."
" Reclining Chair....."
" Revolving Chair....."
" Washstand for Parlor or Sleeping Car, complete....."
" Basket Rack....."
" Door Holder.....Bronze"
" Door Knob....."
" Coat Hook....."
" Hat Hook....."
" Cuspidore or Spittoon....."
" Headboard and Fixtures (for Sleeping Car)....."
" Folding Bed for Car, complete.....Silver"
" Curtain Rod Bracket.....Bronze"
" Double Acting Hinge....."
" Electric or Other Call Bell....."

CLASS NO. 5—FREIGHT CAR APPLIANCES.

" Car Seal.....Bronze"
" Car Replacer.....Silver"
" Car Pusher.....Bronze"
" Grain Car Door.....Silver"
" Freight Car Door....."
" End Door Inside Fastener.....Bronze"
" Freight Car Lock....."
" Door Hanger....."
" Metal Roofing.....Silver"
" Wood Roofing....."
" Combination Roofing....."
[TO BE CONTINUED.]

ORGANIZATION.

At the concluding session of the American Institute of Mining Engineers, held at the Institute of Technology, Boston, on the 23d ult., the following officers were elected: President, Robert W. Hunt, Troy, N. Y.; vice-presidents (for two years), S. F. Emmons, Denver, Col., W. C. Kerr, Washington, D. C., S. T. Wellman, Cleveland, O.; managers (for three years), John Birkinbim, Philadelphia, Pa., Stuart M. Burk, Walburg, W. Va.; E. S. Moffat, Scranton, Pa.; treasurer, Theodore D. Rand, Philadelphia, Pa.; secretary, Thomas M. Drown, Easton, Pa. The secretary presented the report of the Council, from which it appeared that the receipts for the year had been \$13,169.05 and the expenses \$8,140.53, leaving a balance of \$5,028.52; the receipts were much higher than those of the previous year, owing to a large increase of membership and the payment of life memberships. There are now 5 honorary members, 50 foreign members, 1,009 members and 149 associates, and during the year 10 have resigned, 25 have been dropped and 8 have deceased.

In compliance with the terms of its concession, the International Construction Company has published in the *Diario Oficial* a list of the officers and directors of the road, with a brief statement of work done to date. The officers are: C. P. Huntington, president; I. E. Gates, secretary and treasurer; John B. Frisbie, agent in Mexico; Robert B. Gorsuch, chief engineer, and James Converse, Chief of Construction at Piedras Negras. The formal surveys for the road were commenced at the Rio Grande in November, 1881, and construction begun November 27, 1882. The company has issued no obligations. Reports from the Rio Grande state the progress of construction at the rate of a mile a day.

A new bank has been organized in this city under the laws of the State, with a capital of \$300,000, and will be known as the Home Bank. It will begin business at Forty-second street and Eighth avenue on or about May 1. The stockholders have chosen the following directors: George I. Seney, Henry A. Hurlbut, Will-

iam Campbell, Edward Schwyer, G. Waldo Smith, George Starr, Samuel Shethar, William P. Esterbrook, Frank Tilford, O. Wessell, Richard Kelly, George Mulligan, Francis Blessing, George E. Ketcham and Edmund Stephenson. These gentlemen represent \$20,000,000 capital.

At the annual meeting of the stockholders of the Camden and Atlantic Railroad Company, held in Camden, N. J., on the 22d ult., the following board of directors was elected: William L. Elkins, James B. Dayton, Thomas H. Dudley, Edmund E. Read, Crawford Miller, Charles P. Stratton, Edward P. Kershner, Benton K. Jamison, Arnold G. Plummer, John B. Hay, Samuel Fox, John Pearce and Enoch Doughty. The board subsequently elected William L. Elkins president, and Daniel M. Zimmerman secretary and treasurer.

At a meeting of the stockholders of the Housatonic Railroad Company, held in Bridgeport, Conn., on the 23d ult., the following directors were elected: William H. Barnum, of Lime Rock; William E. Down, of Derby; Edward Leavitt, of New York; A. B. Mygatt, of New Milford; Horace Nichols and W. D. Bishop, of Bridgeport; David S. Draper and John H. Peck, of New York, and Charles K. Averill, of Bridgeport. William H. Barnum was elected president, David S. Draper, vice-president, and Charles K. Averill, secretary and treasurer.

THE president and directors of the Louisville and Nashville Railroad Company were recently in Jacksonville, Florida, for the purpose of considering a plan for building a new railroad from Montgomery, Ala., to Chattahoochee, connecting the Louisville and Nashville system with the Florida Central and Western Transit Railroad, of which B. S. Henning is president, and C. D. Willard vice-president. The proposed new line would shorten the distance between Florida and the Northwest over 200 miles.

At the annual meeting of the stockholders of the Northern Central Railway Company, held in Baltimore on the 23d ult., the following directors were elected: George B. Roberts, Wistar Morris, Samuel C. Huey, John P. Green, Edmund Smith, George Small, B. F. Newcomer, S. M. Shoemaker, J. N. Hutchinson, Dell Nobilt, Harry Walters and Henry Gilbert. The directors elected George B. Roberts, president; Frank Thomson, vice-president, and Stephen A. White, secretary.

At a meeting of the directors of the Wheeling and Lake Erie Railroad Company, held at Toledo, Ohio, on the 21st ult., Oliver Garrison, St. Louis; W. J. Forrest, New York; J. W. Wigham, Huron, Ohio; J. G. Warwick, Massillon, Ohio, and N. H. Swayne, Jr., Toledo, were chosen to fill the vacancies in the board of directors. Oliver Garrison was elected president, and M. D. Woodford, vice-president and general manager.

At the annual meeting of the Mexican Guadalupe Mining Company, held in Philadelphia on the 26th ult., 142,885 shares of stock were voted for the following board of directors, elected to serve for the ensuing year: Casper S. Butcher, William Clayton, William D. Frishmuth, Robert England, A. C. McCurdy, B. Frishmuth and

J. A. Meehan. Casper S. Butcher was elected president, and A. C. McCurdy, secretary.

THE officers of the Boston and Lowell Railroad Company are: J. F. Crockett, superintendent of transportation and machinery; C. E. A. Bartlett, treasurer; J. S. Lincoln, general freight agent; B. F. Kendrick, general ticket agent; Myron Taylor, chief clerk; C. S. Mellen, superintendent. The joint business arrangement between this road and the Concord Railroad was terminated on the 28th ult.

At the annual meeting of the stockholders of the Lehigh Coal and Navigation, held in Philadelphia on the 27th ult., the following board of managers was elected: Joseph S. Harris, president; Francis C. Yarnell, vice-president; Edward W. Clark, Fisher Hazard, Charles Parrish, Charles Wheeler, George Whitner, John Liesenring, James M. Wilcox, Edward Lewis, T. Charlton Henry, Samuel Dickson.

At the annual election of the Haddonfield, Marlton and Medford Railroad Company, held at Cooper's Point, N. J., on the 1st inst., the following directors were elected: William L. Elkins, D. M. Zimmerman, E. E. Read, W. C. Houston, Crawford Miller, C. J. Walton, Sr., Benjamin Cooper, E. B. Woolston, H. W. Willis, Ellwood Evans, J. J. Braddock and D. D. Griscom.

At the annual meeting of the Monson Railroad Company, held at Bangor, Me., on the 26th ult., the following directors were elected: John F. Kimball, Eli W. Hoyt, Geo. S. Cushing and Geo. A. Mathews of Lowell, Mass., and A. W. Chapin of Monson. There are fair prospects that work will commence on the line in the spring.

INCORPORATION.

THE American Ship-Building Company filed articles of incorporation with the County Clerk of New York County on the 5th inst. The object is to build and repair vessels, to make and repair machinery for use in vessels, and any articles used in the equipment and outfit of vessels, and generally to manufacture machinery of all kinds for these purposes anywhere in the United States. The incorporators are Henry H. Gorringer, Cornelius Vanderbilt and J. Frederick Tams. The trustees for the first year are Henry H. Gorringer, Charles M. Fry, Henry C. Peddor, James A. Roosevelt, and J. Frederick Tams. The capital is to be \$250,000, divided into 2,500 shares. The company is to continue for fifty years, and will have its main office in New York.

APPLICATION was made at the State Department, Harrisburg, Penn., on the 23d ult., for a charter for the Clearfield and Jefferson Railroad Company, the line of which will run from a point in Clearfield county, on the western side of Clearfield Creek, near Witmer Run, at the terminus of the Bells Gap Railroad Company when completed; north-westward through Clearfield and Indiana counties to Punxsutawney, Jefferson county, a distance of thirty-two miles. The capital stock is \$1,000,000, and the directors are Charles Berwind, Aaron Fries, John Reilly, J. N. Dubarry, F. S. Lewis, J. H. Converse, Allison White.

THE directors of the Susquehanna and Allegheny Railroad Company, which was incorporated at Harrisburg, Penn., on the 27th ult., are: Walston H. Brown, Frederic H. Brown, Thos. F. Wentworth, Herbert P. Brown, of New York; E. G. Platt, Victor Guillon, Robert D. Maxwell, John Rodgers and Frank M. Rodgers, of Philadelphia. The new road is a link of the Rochester and Pittsburgh.

THE bill to incorporate the International Railroad and Steamship Company, which passed the Legislature of Florida on the 26th ult., has been signed by the Governor. Gen. Gordon, of Georgia, is the leading spirit of the enterprise, which is to build a trunk railroad down the backbone of the Peninsula to Key West. The company has a large land grant.

THE Red Rock Coal and Mining Company, of Des Moines, Iowa, has been incorporated with a capital of \$1,000,000. The stockholders are: Jay Gould, Solon Humphreys, Russell Sage, A. L. Hopkins, J. S. Polk, J. S. Runnells and F. M. Hubbell. The company has 4,500 acres of coal lands on the line of the Wabash Railway.

ARTICLES of incorporation have been filed in the office of the Secretary of State of Arkansas for the Osceola and Malden Short Line Railroad, with a capital stock of \$300,000. The line will extend from Osceola, Mississippi county, to Malden, Mo., a distance of sixty miles.

A CERTIFICATE of incorporation was filed with the Secretary of State of Ohio on the 1st inst., of the Cleveland, Lorain and Wheeling Railroad Company; capital, \$5,600,000. Principal office to be located at Lorain.

THE Texas Midland Railroad has been chartered, to run from Waco to Palestine.

CONSTRUCTION.

It is announced that the Oregon Short Division of the Union Pacific Railway has been completed from Granger, Wyoming, to Shoshone, Idaho, a distance of 321 miles, and through trains will be run to that point. From Shoshone a branch is being built and will probably be completed by May 1 to Hailey, Idaho. First-class stages will run from Shoshone, or the end of the track of the Wood River Branch, to all points in the Wood River region. The Oregon Short Line Division is being rapidly pushed westward and connections are now made at the end of the track with the Utah, Idaho and Oregon stage line for Walla Walla, W. T., and intermediate points. The stages connect at Pendleton, Oregon, and Walla Walla, W. T., with the Oregon Railroad and Navigation Company's lines for Portland and other points in Oregon and Washington Territory.

THE work on the Canton, Aberdeen and Nashville Railroad is being pushed forward rapidly, and the contractors are confident that the line will be completed by November next. B. W. De Courcy, the chief engineer of the road, has made a trip on horseback over the line and reports that work is progressing in a very satisfactory manner. There are several large forces of men at work between Kosciusko and Starkville. The Illinois Central Railroad Company has just purchased 900 tons of steel rails for the road, the delivery of which will be commenced

at once, and preparations are being made for active track-laying.

THE survey of the New York, Lake Erie and Western Company's new route to the anthracite coal regions was completed recently. The new road will be known as the Erie and Wyoming Valley and will run from Hawley to Pittston, a distance of forty-six miles. Contracts for building the new road have been opened at the New York office and the management has determined to have the road in running condition by January 1, 1884. The Erie and Wyoming line will take the place of the Pennsylvania Coal Company's gravity road. The road opens direct coal traffic with Boston and other portions of New England.

It is stated that the work mapped out by the Chicago, Milwaukee and St. Paul Railroad Company to be commenced early this season, and which it considers as most important for it to build, is as follows: First, the building of the Defiance line to Sioux City; second, an extension of the line from Cedar Rapids to Kansas City via Sigourney and Ottumwa; third, the building of about sixty-five miles of line in the Jim Valley in Dakota, completing various branches now in operation.

THE survey of the Scioto Valley Railroad, of Ohio, which is about to extend its line northwest from Columbus to Fort Wayne, Ind., whence it will have an outlet to Chicago, has been completed, and the grading of the new branches is to be begun shortly. The Scioto Valley Railroad was opened in 1876, and was extended to opposite Ashland, Kentucky, forming a connection with the Chesapeake and Ohio Railway in 1881.

THE Tavares (Florida) *Herald* says that final arrangements have been perfected for pushing to immediate completion to Tavares the St. Johns and Lake Eustis Railway. The iron has been ordered and is on the way. There will be no stopping at Lake Eustis or any other point, but Tavares will be the terminus of the road until it takes another start toward the Gulf.

THE Cincinnati, Van Wert and Michigan Railroad Company have purchased the Paulding and Cecil Railroad, and propose to extend their road north to Bryan, on the Lake Shore and Michigan Southern Railway, and south to Eaton, on the Cincinnati, Hamilton and Dayton Railroad, this summer. The officers have established their headquarters in Van Wert.

THE Long Island Railroad Company will begin the work of grading for a double track between Flushing and Winfield in a few days. The old Long Island road has been relaid with new steel rails and the coming summer passenger trains will be run over this route as far as Jamaica.

THE charter of the International Railroad and Steamship Company, which passed both Houses of the Florida Legislature, and became a law, contemplates a Trunk Line from the Georgia Line to Key West. The road had a land grant of nearly 7,000,000 acres of State land.

THE subscriptions have been completed which secure the building of the Diagonal Railroad to Des Moines. The road, as projected, is to run from McGregor to Nebraska City, and

the track is to be laid from Marshalltown to Waterloo by June 1.

THE Yazoo *Sentinel* learns from Capt. Farrar, engineer of the Yazoo and Mississippi Valley Railroad, that the road will be completed to Yazoo City by October if reasonably fair weather is had up to that time.

TRACK-LAYING on the Northern Pacific Railroad has reached a point sixteen miles west of Livingston, which is 1,045 miles from St. Paul and within eight miles of Roseman, the third city in Montana.

A NUMBER of New York and Boston capitalists were in Ottawa on the 2d inst., negotiating with the Ontario Pacific Railway Co., for the construction of a line from Cornwall to Sault Ste. Marie.

THE track of the Dorchester and Delaware Railroad, which recently passed into the possession of the Pennsylvania Railroad Company, are to be laid at once and the line opened for travel.

THE Pensacola and Atlantic Railroad was opened for business on the 1st inst., and is running daily passenger trains from Pensacola direct to Tallahassee and Jacksonville, Fla.

ARRANGEMENTS have been made by the projectors of the Memphis, Selma and Brunswick Railroad, for the rapid extension of the line to Aberdeen, Miss.

THE grading on the Natchez, Red River and Texas road has been completed to Trinity, and everything is in readiness for track-laying.

THE narrow-gauge railroad between Texarkana and Camden, Ark., is completed with the exception of a gap of ten miles.

THE Georgia Pacific Railroad was completed to Anniston, Ala., on the 25th ult.

PERSONAL.

THE management of the Charlotte, Columbia and Augusta and the Columbia and Greenville railroads and their branches has been consolidated under one administration. The following officers were elected: President, W. A. C. Haskell, of Columbia; assistant general manager, Peyton Randolph, of Richmond, Va.; auditor and secretary, John Craig, of Columbia; treasurer, John C. C. Smith, of Columbia. This consolidation embraces 486 miles of broad gauge and 85 miles of narrow gauge railroad.

THE Associated Railways of Virginia and the Carolinas have issued the following circular: Mr. Waldo A. Pearce, in addition to his duties as freight agent of these lines for New England, will also assume charge of our Boston Passenger Agency, No. 228 Washington street, Boston.

ISAAC D. BARTON, general superintendent of the Long Island Railroad, has been appointed superintendent of the New York, Woodhaven and Rockaway Beach Railroad. This places all the Long Island roads under one supervision.

THE officers of the Lake St. Francis Navigation Company are: Robert Bickerdike, president, Robert Cowan, vice-president, J. N. Beaudry, secretary and treasurer, and G. H. Philips, assistant secretary and treasurer.

J. C. RAUM has been appointed assistant engineer of the Hartford and Harlem Railroad.

He will have charge of the line from New Haven to New York, with headquarters at Norwalk, Conn.

THE Senate of Alabama has chosen W. L. Bragg, C. P. Ball and James Crook as Railroad Commissioners for the next two years. They comprise the present board.

THE Railroad Commissioners of Iowa are: James Wilson Traer, of Tama county; Peter A. Day, of Iowa City, and A. R. Anderson, of Sydney, Fremont county.

OLIVER GARRISON has been elected president, and M. D. Woodford vice-president and general manager of the Wheeling and Lake Erie Railway Company.

L. S. BROWN has accepted the position of general freight and passenger agent of the Georgia Pacific Railway Co., with headquarters at Atlanta.

THE Railroad and Warehouse Commissioners of Illinois, recently appointed by the Governor, are: W. N. Brainard, E. C. Lewis and C. T. Stratton.

JONAS H. FRENCH has been elected president and George F. Evans secretary and treasurer of the Louisville, Evansville and St. Louis Railroad Co.

W. H. FINLEY has been appointed general freight agent of the Texas and Pacific Railway Company, and will establish his office in New Orleans.

J. G. CASE has been appointed treasurer of the Barkers' and Merchants' Telegraph Company, vice J. Heron Crosman resigned.

WILLIAM P. ROBINSON has been appointed traffic manager of the New York, West Shore and Buffalo Railway Company.

CHARLES H. CORT has been appointed superintendent of the Boston, Hoosac Tunnel and Western Railway.

R. G. HANSON has received the appointment of general western agent of the Virginia Midland Railway Co.

J. A. DEW has accepted the position of Master of Transportation of the Chesapeake and Ohio Railway.

J. L. P. O'HANLEY, of Ottawa, has been appointed chief engineer of the Ontario and Pacific Railway.

FRANK E. BROWN has received the appointment of general passenger agent of the Concord Railroad.

P. D. FORD has been appointed supervisor of the New York division of the Pennsylvania Railroad.

E. D. FROST has been appointed superintendent of the Natchez, Jackson and Columbus Railroad.

ALBERT NETTER has been elected president of the Vincennes, Jasper and Ohio River Railroad.

SAMUEL BARRETT has been appointed general freight agent of the Concord Railroad.

CHAS. S. MELLEN has been appointed superintendent of the Boston and Lowell Railroad.

A SIGN-BOARD can't tell everything. It takes an advertisement to do that.

Housatonic Railroad.

The earnings of the Housatonic Railroad for the years ending September 30, 1881 and 1882, were as follows:

	1881.	1882.
From passengers.....	\$217,215.96	\$230,282.98
From freight.....	470,756.69	446,956.13
From milk.....	41,260.75	40,335.92
From express.....	12,750.00	15,000.00
From mails.....	11,110.20	12,356.57
From wharfage.....	1,419.50	1,398.16

\$754,513.10 \$746,327.77

Expenses, viz:		
Repairs of road.....	\$ 63,760.77	\$ 59,753.17
Repairs of engines.....	28,121.16	34,011.75
Repairs of cars.....	37,855.11	41,656.99
Repairs of bridges.....	14,033.37	3,417.35
Repairs of buildings, etc.....	17,500.34	20,356.47
Renewal of ties.....	18,960.06	22,830.02
Steel rails.....	52,303.97	59,969.20
Fuel for locomotives.....	60,270.14	59,969.69
Oil and waste.....	6,342.72	6,312.26
Locomotive service.....	31,731.53	33,845.25
Passenger train service.....	12,518.79	11,287.85
Freight train service.....	20,293.44	22,597.10
Loss and damage.....	1,917.99	1,098.03
Agents and station service.....	40,650.34	47,429.34
Salaries general officers and clerks.....	17,998.46	19,653.19
Mileage of cars.....	4,501.50	2,428.76
Improvements at Bridgeport passenger depot.....	7,514.37	.....
Expenses N. Y., Hous. and Nor. R. R.....	5,405.75	.....
New passenger depot Housatonic.....	.....	7,970.01
All other expenses.....	38,791.31	36,538.23

Net earnings.....	\$480,531.12	\$493,124.66
From which deduct—	\$273,981.98	\$253,203.10
State and other taxes.....	10,980.00	12,447.71
Rent Stockbridge and Pittsfield R. R.....	31,409.00	31,409.00
Rent Berkshire R. R.....	42,000.00	42,000.00
Rent West Stockbridge R. R.....	668.59	666.92
Rent N. Y., Hous. and Nor. R. R.....	4,725.86	.....
Interest.....	21,630.95	9,801.97
Coupon interest.....	35,500.00	59,550.00
Miscellaneous.....	22.58	.....

Net gain after deducting all expenses.....	\$126,549.14	\$155,875.60
Dividends of two per cent each were paid in January, April, July and October on \$1,180,000 of preferred stock, amounting to.....	94,400.00	94,400.00

Leaving a balance of.....	\$ 32,615.00	\$ 2,927.50
Add balance from previous year.....	187,398.23	220,515.23

Balance at credit of profit and loss Sept. 30.....	\$220,513.23	\$223,440.73
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During the fiscal year ending September 30, 1881, the company purchased that portion of the New York, Housatonic and Northern Railroad between Brookfield Junction to and including the terminal facilities at Danbury for \$65,000; paid for and laid 1,438 tons of steel rails, costing, @ \$50, \$71,925; built twenty-five new platform cars for \$11,875; built at Amesville two dwelling houses, costing \$2,500; made improvements at Bridgeport passenger depot, and charged in operating expenses, \$7,514.37—a total extraordinary but necessary expense during that year of \$158,814.37.

During the fiscal year ending September 30, 1882, there were issued \$200,000 five per cent Rolling-Stock Certificates, the proceeds of which were invested in 350 Fast Freight Line cars and 50 coal cars. There were also purchased 1,220 tons of steel rails, and a contract made for 2,500 tons for May and June delivery, at \$40 per ton, which when laid will give a continuous steel rail track from Bridgeport to Pittsfield. Three locomotives were purchased during the year at a cost of \$42,041.54, and one locomotive sold for \$3,280. Land has also been purchased and new freight and passenger depots built, and increased siding laid at Housatonic, costing \$21,305.13.

The report states that the general condition

of the property is first-class, and will be found for the first time fully capable of meeting economically any freight and passenger demands made upon it.

The equipment of the road consists of 24 locomotives, 26 eight-wheel and 1 four-wheel passenger cars, 9 eight-wheel and 3 four-wheel mail and smoking cars, and 533 box, 329 flat, 14 hay, 1 wrecking, and 3 caboose cars, the total valuation of which is \$722,550. Last year the company had 22 locomotives, 36 passenger and baggage cars and 537 freight, etc. cars, the total valuation of which was \$488,000.

The number of miles run by locomotives in 1882 was 539,470, against 544,810 in 1881; the number of passengers carried in 1882 was 340,478 against 319,743 in 1881; the number of passengers carried one mile in 1882 was 8,546,740, against 7,846,894 in 1881; tons of freight carried in 1882, 353,909; in 1881, 348,614; tons of freight carried one mile in 1882, 17,510,670; in 1881, 17,277,336.

CONDENSED BALANCE SHEET, SEPT. 30,

	1881.	1882.
Railroad and equipment.....	\$2,205,558.52	\$2,205,558.52
Permanent improvements and additions.....	489,932.26	560,240.03
New York, Housatonic and Northern Railroad.....	66,652.09	65,000.00
The Ames property.....	170,889.69	170,889.69
Real estate.....	30,243.04	33,343.44
Stockbridge and Pittsfield Railroad.....	5,992.76	5,992.76
Cash on hand and in banks.....	133,390.54	105,824.39
Accounts receivable.....	72,217.16	77,396.76
Bills receivable.....	1,298.93	726.13
Rolling-stock cars.....	.....	215,793.47
Due from stations.....	38,884.53	39,029.09
Wood lots.....	987.99	.....
Materials on hand.....	67,069.35	75,627.76
Totals.....	\$3,276,116.86	\$3,556,310.03
Capital stock, old.....	\$ 820,000.00	\$ 820,000.00
" preferred.....	1,180,000.00	1,180,000.00
Bonds due in 1883—7 per cent.....	150,000.00	150,000.00
" " 1885—7 per cent.....	100,000.00	100,000.00
" " 1886—6 per cent.....	300,000.00	300,000.00
" " 1910—5 per cent.....	300,000.00	300,000.00
Rolling-stock certificates, due in 1885—5 per cent.....	.....	200,000.00
September expenses.....	38,597.25	41,085.55
Rent of Stockbridge and Pittsfield Railroad.....	7,852.25	7,852.25
Rent of Berkshire Railroad.....	3,500.00	3,500.00
Rent of West Stockbridge Railroad.....	50.00	50.00
Book accounts.....	5,951.14	12,987.64
Rolling stock earnings.....	.....	11,756.50
Unclaimed dividends.....	108.00	108.00
Coupon and registered interest.....	14,544.99	17,529.99
Bills payable.....	135,000.00	188,008.37
Profit and loss.....	220,513.23	223,440.73
Totals, as above.....	\$3,276,116.86	\$3,556,310.03

President.—WILLIAM H. BARNUM.

Vice-President.—DAVID S. DRAPER.

Directors.—Wm. H. Barnum, Lime Rock, Conn.; Samuel Willits, Edward Leavitt, New York; A. B. Mygott, New Milford, Conn.; Horace Nichols, Wm. D. Bishop, Bridgeport, Conn.; David S. Draper, John B. Peck, New York; Charles K. Averill, Bridgeport, Conn.

Sec. and Treasurer.—CHARLES K. AVERILL.

Superintendent.—W. H. YEOMANS.

Boston and Washington Through Trains Resumed.

It is officially announced by the passenger department of the Pennsylvania Railroad Company that train service between Boston and Washington (via "New York and New England Railroad," "New York, New Haven and Hartford Railroad," "transfer steamer Maryland," and "Pennsylvania Route"), with through passenger cars and Pullman sleepers, has been re-

established. The Maryland has been thoroughly overhauled—in fact, almost rebuilt—and the facilities for through service by this route made more perfect than ever before. Southward the train will leave Boston every evening at 7 o'clock, arrive at Philadelphia 6.50 A. M., Baltimore at 9.45 A. M., and Washington at 11.10 A. M. Northward—Leave Washington on week days at 1.30 P. M., and on Sundays at 4.20 P. M. Baltimore on week days at 3 P. M., and on Sundays at 5.40 P. M. Philadelphia every day at 6.30 P. M., and arrive at Boston at 7.55 A. M. Pullman sleeping car will be run between Boston and Washington, and there will also be a Pullman sleeper between Boston and Philadelphia.

Railroads in Florida.

Two new railroads have just been chartered in Florida, to be built at an early day. One of them, according to the *Florida State Journal*, is to run from New Bradford, on the Suwannee River, to Dead Man's Bay. At New Bradford it will connect with the Live Oak road and through it with the great Georgia system of railroads, and thus give a direct route from the Gulf to Cincinnati and all points North, saving miles of travel and countless dollars of freight. Its value to the State cannot be estimated. The other road is no less important. It will run from Anclote River across to Indiana River inlet, thus traversing and opening up to the world the finest sections of Florida, and giving immediate and direct egress to the market of the immense crops of oranges and other fruits in that section. Then it will also supply a long felt want in getting the necessary breadstuffs and merchants' supplies for South Florida. It also traverses the whole Peninsular of Florida, joining the Gulf and the Atlantic. These two roads will add greatly to the wealth of the State, besides their great influence in setting up and increasing educational facilities. The directors are well known, and backed by some of the strongest and best known capitalists and railroad men on the continent, and are determined to push these roads through without delay.

McLeod Air Railroad Signal.

At a special meeting of the stockholders of the McLeod Air Railroad Signal Company, held at Hartford, Conn., February 24, 1883, it was reported that great improvements have been accomplished in simplifying and perfecting the McLeod System of "Crossing" and "Block" system of signals, and that they are ready for main track use as soon as provision is made for their manufacture, and that many orders have already been received for them from railroads in different parts of the country.

Numerous letters from railroad officials, who have personally examined this system, show that it meets their high approval, and that its universal adoption seems beyond any doubt.

It was then stated that \$260,000 of the capital stock remained in the treasury for working expense; and the directors were authorized to sell sufficient of it to raise the money neces-

sary to complete the works of the company at Boston, and to make such further arrangements as they may deem best for the manufacture and introduction of the signals as early as possible. Thirty-seven stockholders were represented at the meeting, and the feeling and outlook for a large business in the near future seemed very good.

Southern Pacific Railroad.

At a meeting of the Railroad Commissioners in San Francisco, on the 12th ult., Mr. A. N. Towne, of the Central Pacific Railroad, presented a communication on the subject of the construction of railroads in California, giving statistics and data concerning the construction of the Southern Pacific Railroad on the Sunset route to New Orleans, showing the present assessment rolls of the districts through which the road passes, and what they were in 1870—showing an increase of 300 per cent.

Mr. Towne invited the Commissioners to make searching inquiries into the workings of the railroad, stating that the acts of both companies would be found just to all. Reductions had been made from year to year, and millions of dollars had been saved to farmers. It was shown from the balance sheet that the aggregate dividends of all roads, if applied to the capital employed, would amount to but a fraction over two per cent.

The balance sheet filed for the year 1882 shows the gross earnings to have been \$25,662,757.12; earnings of the steamer division, \$20,485.29; interest on sinking fund, \$281,260. Total, \$25,964,502.41. Expenditures—Operating expenses, \$16,067,183.68; general expenses, \$330,646.72; legal expenses, \$246,751.41; civil engineering, \$1,547,965; taxes, \$448,005.69; expenses of the land department, \$2,370,078; interest, \$3,443,413.32; company's sinking fund and interest paid to the United States, \$1,100,000. Total expenditures, \$22,679,940.24. Surplus for the year from all sources available for dividends, \$3,284,562.17. The length of road reported is 3,201 miles.

Elevated Railway in Vienna.

The Vienna Metropolitan Railway, for which the Emperor has granted the concession to an English company, will, according to a correspondent of the *London Standard*, be an elevated line on the model of the city railways of Berlin and New York. The English contractors, who have already deposited the required security of 1,000,000 florins, undertake to find the necessary capital of 60,000,000 florins, or upward of £5,000,000, within six months. A joint company is to be formed, with two boards of directors, one being Austrian and one English, and with Vienna as their headquarters. Only half the capital is to consist of shares, the rest being raised by debentures.

The iron and other materials to be used in the construction, it is agreed, shall be furnished by Austrian manufacturers exclusively, and all the officials, except those at the head of the company are to be Austrians. The iron required for the construction of the pillars, viaducts, and rails is estimated at about 60,000

tons, and will cost over 12,000,000 florins. The engines are to be worked not by steam, but either by hot water, compressed air, or electricity, in order to prevent smoke. The railway will necessitate the construction of a few bridges over the Wien River and one small tunnel under it, but no other costly or difficult work appears necessary. The whole length will be 14,773 kilometres, of which 8,786 kilometres will run on iron viaducts, 0.449 kilometres through the tunnel, and the rest on canal or river banks or through the excavations. The velocity will be 30 kilometres an hour, and the whole line, including 19 stations, will be traversed in 38 minutes. Every five minutes a train is to start, traveling round the entire circle in both directions. Cheap "workmen's trains" will leave early in the morning and late in the evening. The whole line must be placed at the disposal of the military authorities in case of war for the through transport of troops and material from one terminus to another. The impetus which will be given to Vienna when this railway is completed will be enormous. No city in Europe possesses such lovely suburbs or such a beautiful country in its immediate neighborhood as Vienna. I need only mention the Wiener Wald, from the Kahlenberg to Hinterbrühl, Modling, Baden, and Vöslau, on the road to the Semmering and Styrian Alps. According to the plan adopted there will be a central station erected on the "Franz Josef's Quay" along the Danube Canal, which divides the populous quarter called Leopoldstadt from the city proper and from new Vienna. This central station will be two or three minutes from the Bourse on the Schotten Ring, about four minutes' walk from many of our most splendid new buildings, like the Parliament-house, the University, the splendid new Town Hall, the new Palace of Justice, the new Burg Theatre, and the new Imperial Museums. The only fault to be found with the projected elevated railway is that it will follow the River Wien, which cuts Vienna into two very irregular and unequal parts. The consequence will be that we shall have no inner circle after the London fashion, but only an outer circle.

New Iron Bridge over the Yazoo River.

The Memphis, Vicksburg, and New Orleans, or what is better known as the Wilson line of railroads, is now building quite a large iron bridge over the Yazoo River, some 12 miles above Vicksburg, Miss. The construction of the piers for the bridge has been vigorously prosecuted for some time past. The point selected is unusually difficult and expensive for the construction of a bridge, as there is no bed rock or other material within reach for the foundations to rest upon, and the river, even at low water, is nearly 40 feet deep.

The bridge, as described by the *Henderson (Ky.) News*, will consist of three spans about 300 feet long each, two of them fixed spans, and the third, a draw span, located in the middle of the channel. These will be some six feet above the level of extreme high water, and slightly above the elevation of the banks on either side. There will be five piers, one at each end and on the bank and three in the river.

To obtain the requisite supporting capacity, piles—100 in the pivot and 72 in each of the other two channel piers—are driven to a depth of forty feet into the river bottom. The outfit to drive these piles consists of a regular pile driver engine, with a 4,000 pound hammer, a Skinner steam hammer weighing 7,000 pounds, and a duplex Worthington pump to supply a water jet, when this can be used in place of driving, or to assist the latter. When the jet can be used to advantage, pipes are so arranged that one or more powerful jets are brought into play at the point of the pile, excavating a hole for the latter to sink into. The caisson for the first pier is fifty feet in diameter, with sides two feet thick and six feet high; the roof consists of solid timber and is seven feet thick. The piers, when complete, will consist of piles sawed off level with the bottom of the river. Surrounding these is a solid platform (the roof of the caisson) of timber seven feet thick, on which will rest the piers proper, which will be one continuous mass of concrete. The cost of the entire structure is estimated at from \$225,000 to \$250,000.

Production of Iron and Steel Rails.

The Secretary of the American Iron and Steel Association reports that returns have been received from all the mills that rolled iron and steel railway bars in 1882. These reports show that the total production of iron and steel rails in this country last year was 1,688,794 net tons, a falling off, as compared with 1881, of 156,306 net tons, which is equivalent to a decrease of 8 per cent. There was a decrease in every State but six—Vermont, Massachusetts, Missouri, Colorado, Wyoming and California. No rails were made during the year in New Jersey, Virginia and Georgia.

The following shows the production of the various kinds of rails in 1882, as compared with 1881 in net tons: Bessemer steel rails, 1881, 1,330,302 tons; in 1882, 1,438,155 tons; iron rails, 1881, 488,581 tons; in 1882, 227,874 tons; open hearth steel rails, 1881, 25,217 tons; in 1882, 22,765 tons. This shows that the quantity of Bessemer steel rails made in 1882 exceeded the quantity made in 1881, while the production of iron rails fell off heavily and that of open hearth steel rails fell off slightly.

The five leading rail-making States are Pennsylvania, Illinois, Ohio, New York and Missouri. Of the 1,517,513 tons of rails produced by these States in 1882, Pennsylvania produced 850,908 tons; Illinois, 362,250 tons; Ohio, 113,806 tons; New York, 155,021 tons; and Missouri, 85,528 tons.

Fast Time.

"ONE of the fastest trips I ever made over the Lake Shore Railroad," said an old engineer the other day, "was when I yanked Commodore Vanderbilt from Erie to Cleveland in an hour and thirty minutes. That was on the 1st or 2d of May, 1876, the day before the stockholders' meeting. The special had been delayed all the way from New York to Buffalo by the immense travel over the road incidental to the Centennial Exhibition. When I backed up to the car at Erie, my orders were to 'let her out,' and I

did. From Erie to Girard, Penn., the track was heavy, and it took us eighteen minutes to make the fifteen miles. That would never do. The fireman braced up the fire and I pulled her open. Well, now, we fairly flew. You see we had to make four stops, once for water and three times at targets. When you come to take out of ninety-nine minutes, the actual time consumed in the whole trip, the time occupied in four stops and the time lost in going from Erie to Girard, you can see that some lively time had to be made somewhere. The distance is ninety-five and a half miles, and we must have made the last eighty of them in just eighty minutes and stopped four times. I guess that's a little the liveliest traveling the old man ever got."

Weekly News Items.

The new dock at Cardiff, Wales, of which the Marquis of Bute recently cut the first sod, will extend over thirty-five acres, exclusive of timber ponds, and will cost about £600,000. It is to be completed within three years. The lock will be the largest in the world, its dimensions being 80 feet wide and 600 feet long, while the depth of water over the sills will vary from 26 feet to 30 feet. The dock will be 2,400 feet long and 600 feet wide, the depth of water varying between 25 feet and 33 feet, according to tide. There will be timber ponds covering eighteen acres adjoining. All the railway arrangements and the loading and discharging of machinery will be of the most complete description. When the new dock is complete there will be a water area in Cardiff basins and docks of 130 acres, and a quayside of five miles.

A CURIOUS advertisement has lately been inserted in a Paris paper, wherein a certain "Yankee Engineer" thus addresses all "whom it may concern":—"Having visited the Leaning Tower at Pisa, Italy, I am fully convinced that the architectural grandeur and beauty of this ancient and colossal relic of past ages can be wonderfully improved. I hereby offer to contract to put this immense structure in a perpendicular position and raise it to a level of the ground for the sum of \$600,000, the terms of payment and time of completion to be agreed upon, the time not to exceed ninety days."

THERE is now being made at the Thompson & Williams foundry, in Stratford, Canada, a fly wheel or pulley of enormous size. It is part of the immense engine which the company is building for a cotton mill in the Maritime Provinces. The diameter of the wheel is twenty-four feet; its width is five feet two inches, and weight about twenty-six tons. The rim was cast in six segments, and the hub in two parts.

In the suit brought in the United States Court at Indianapolis, Ind., by James G. Tyner, et al., against the Wabash, St. Louis and Pacific Railway Company, to recover on some Equipment bonds issued by the Toledo and Western Railroad Company, amounting to \$600,000, with interest since 1862, the Court held that the defendant company was liable.

A MOVEMENT is on foot in Montreal to establish a line of steamers between that port and Mexico.

CORRESPONDENCE.

[COMMUNICATIONS are solicited for this department on all subjects pertaining to Railroads, Steam Navigation, Machinery, Manufactures, etc. No attention will be paid to communications unless the name and address of the writer is furnished us, though if desired, they will be withheld from publication. We assume no responsibility for statements made by correspondents, and we do not necessarily endorse ideas advanced by them. Under these conditions we think it of value to our readers to devote a liberal space to the free discussion by others—whose opinions may be at variance with our own—of subjects pertinent to this department of the AMERICAN RAILROAD JOURNAL.]

OUR CANADIAN LETTER.

[From our Special Correspondent.]

THE CANADIAN PACIFIC—GOVERNMENT RAILWAYS—RAILROAD AND OTHER NOTES.

The Honorable Minister of Railways and Canals, Sir Charles Tupper, laid before the House the annual report of his department for the past fiscal year from July 1, 1881, to June 30, 1882. The present report deals with the undermentioned railways of the Dominion, either directly controlled by the Federal Government or towards the construction of which subsidies have been granted or authorized.

Controlled: The Intercolonial, the Prince Edward Island.

Subsidized or with subsidy authorized: The Canadian Pacific, the Canada Central (Pembroke to Callander), Gravenhurst to Callander, St. Raymond to Lake John, Riviere Ouelle to Edmunston, the Great American and European Short Line, the Chignecto Marine Transport Railway.

THE CANADIAN PACIFIC RAILWAY.

Under the terms of the contract entered into in 1881 with the Canadian Pacific Railway Company, the government have undertaken to construct the line between Prince Arthur's Landing, on Lake Superior, and Red River; and between Savona's Ferry, at the foot of Lake Kamloops, and Port Moody, in British Columbia; and the company, on their part, have undertaken to construct, within a specified time, line between Callander Station, their eastern terminus at the east end of Lake Nipissing, and Prince Arthur's Landing; also between Red River and Savona's Ferry; the whole line to be the property of the company, and to be maintained and operated by said company.

Trunk Line:—

The following distances are calculated on a route running through the city of Winnipeg, and by the Kicking Horse Pass, if approved:—

	Miles.
1. From Callander (120 miles west from Pembroke) to Prince Arthur's Landing, an estimated distance of.....	650
2. From Prince Arthur's Landing to Winnipeg.....	433
3. From Winnipeg, via Kicking Horse Pass, to Savona's Ferry (at the foot of Kamloops Lake) an estimated distance of.....	1,259
4. From Savona's Ferry to Port Moody.....	215

Approximate length of the trunk line between Callander and Port Moody on the Pacific..... 2,557

In addition to the line of the Canada Central Railway between Ottawa and Callander, a distance of 228 miles, which was acquired last year by the Canadian Pacific Railway, they have now purchased and operate the portion of the line

of the Quebec, Montreal, Ottawa and Occidental Railway between Ottawa and Montreal, a distance of 119 miles; being an addition of 347 miles incorporated into their main line system, making the total approximate distance between Montreal and Port Moody, 2,904 miles.

The section of road, 120 miles, between Pembroke and Callander for the construction of which the Canada Central Railway was subsidized by the Government to the extent of \$12,000 a mile, is nearly completed. The road for ninety-four miles between Pembroke and Mattawa is under traffic, and the remainder is in use for the transport of materials and supplies for the construction of the line west from Callander.

The branch line from Emerson to Winnipeg, sixty-five miles, and the main line from Winnipeg eastward to Tilford, ninety-four miles, having been transferred to the company, the portions to be completed by the government at the beginning of the fiscal year 1881-82 were: From Prince Arthur's Landing to Telford, 339 miles; from Savona's Ferry to Port Moody, 215 miles. On the 12th January, 1882, a subsection of forty miles of road between Telford and a point near Rat Portage was transferred to the company. Of the works in British Columbia, between Savona's Ferry and Port Moody, 215 miles; between Port Moody and Emory's Bar, eighty-five and a half miles is being vigorously prosecuted. The works going on under contract by the company are: From Callander to Prince Arthur's Landing, an estimated distance of 650 miles; from Winnipeg to Savona's Ferry, an estimated distance of 1,259 miles.

The location of the line up to the South Saskatchewan River, a distance of about 660 miles from Winnipeg, has received approval, and on this distance the company have now, up to the end of January, 1883, completed 581 miles of road.

In October last the opening of the line for traffic up to Regina, a distance, according to the published time tables of the company, of 356 miles, was authorized.

The government railways in operation are: The Intercolonial, 840 miles; Prince Edward Island, 199 miles; Windsor Branch (maintained only), thirty-two miles.

The Intercolonial and Windsor Branch being worked at a profit respectively of \$9,605 and \$7,953. The Prince Edward Railway, owing to increased expenditures in buildings and side tracks, cost \$90,992—in addition to receipts for these improvements. The successful manner in which the government railways are carried on reflects great credit on the management of Collingwood Schrieber, Esq., engineer-in-chief of government railways.

RAILWAY NOTES.

The New Brunswick Railway Company have petitioned the government for leave to increase the capital stock, and to ratify the list of certain lines of railway made by the New Brunswick and Canada Railway Co.

The Great Eastern Railroad Co. officials state that there are clerical errors in the charter as follows: The stock of the company is stated as \$1,000,000 instead of \$6,000,000, and the fourth and last clause contradict each other. They ask to have the act corrected.

Mr. Mullock's Bill to amend the consolidated Railway Act of 1879 was referred to the Committee on Railways and Telegraph Lines. Under the Railway Act of 1879, railways could, *without consulting other than their own interests*, make pooling arrangements for 21 years. The Hamilton and Northwestern Railway started as an independent line and bonused as an independent line by the villages, as soon as they were in working operation pooled with the Northern Railway for twenty-one years, thereby defeating the very object of the people who had voted the subsidy. By Mr. Mullock's bill, amalgamation could only take place by consent of the Governor-in-Council.

It is reported that the Grand Trunk Railway have secured a controlling interest in the Hamilton and Northwestern Railway, and that they will soon have the Northern Railroad, and assume control of the Toronto, Grey and Bruce.

The Ontario and Pacific Railway have opened offices here, and will shortly begin the survey of the line.

The Grand Trunk Railway have, it is said, secured the controlling interest in the St. Lawrence and Ottawa Railway which will give them two entrances into Ottawa.

A bill to incorporate the Dominion Railway Trust and Construction Company, has passed a second reading. The capital stock is one million dollars. The company will have power to lease and work railways, elevators and telegraph lines, charter boats, etc., construct and equip railways, etc., and to assist contractors etc.

It is claimed by the Railway Companies that the Railway Commissioner's bill, if passed, will do great damage to the country, and railway companies, that foreign capital will seek investment elsewhere, and that in a new country like Canada every encouragement should be given to investors and to railways which build it up and make it prosperous. Certainly the arguments advanced by the railway companies and their friends have great weight, and will probably defeat the bill.

It is said the government will subsidize a direct steamship line to Mexico, and \$50,000 have been placed in the estimates for that purpose.

Petitions have been sent in to Parliament asking for the admission free of duty of all scientific works in foreign languages, all scientific periodicals and all transactions of scientific societies.

Commissioner A. H. Blakely, appointed to inquire into and report on the operation of the laws regulating labor in the State of Massachusetts, has handed in his report. He approves of the Massachusetts system, generally, but thinks the law defective inasmuch as Inspectors are not given power to examine persons in a mill, with reference to any cause of complaint which may have reached them. The Commissioner was struck with the large number of French Canadians in the mill districts of the Eastern States, and says: "They all seek employment in the mills, and were there sufficient employment of this kind in the Dominion it is certain that many of them would gladly come back, as they invariably cherish a wish to return to their own land at some future time."

OTTAWA, March 8, 1883.

E. W. Vanderbilt. E. M. Hopkins.

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Steamboat train leaves Boston 6:30 P. M. arrives at New London at 10:00 P. M., connecting with the new steamer **City of Worcester**, Monday, Wednesdays and Fridays, and **City of New York**, Tuesdays, Thursdays and Saturdays. Returning, steamer leaves Pier 40, North River, New York, at 4:30 P. M., connecting at New London with train leaving at 4:05 A. M., arriving in Boston at 8:00 A. M. Good night's rest on the boat.

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Located directly on its lines are the cities of **CHICAGO, Milwaukee, La Crosse, Winona, St. Paul, Minneapolis, Madison, Prairie du Chien, Mason City, Sioux City, Yankton, Albert Lea, Aberdeen, Dubuque, Rock Island, Cedar Rapids, and Council Bluffs**, as well as innumerable other principal business centers and favorite resorts; and passengers going West, North, South or East are able to use the **CHICAGO, MILWAUKEE & ST. PAUL RAILWAY** to the best advantage.

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Running through to Syracuse, N.Y., where connection is made with through sleeping-cars for Cincinnati, Cleveland, Toledo, **DETROIT AND CHICAGO.**

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Pullman Sleeping Car attached, running through to Cincinnati without change. (Only Line running Pullman Cars from Boston.) This car runs via Erie Railway and N.Y., P. & O. R.R., making direct connection for Louisville, St. Louis, Kansas City, New Orleans, and all points in Texas and New Mexico.

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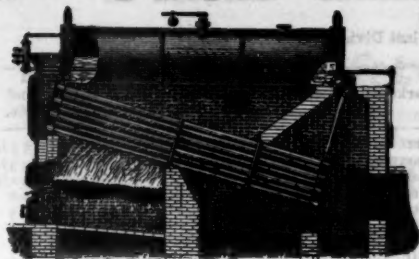
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JOHN ADAMS, General Superintendent. F. O. HEALD, Acting Gen'l Passenger and Ticket Agent.

In effect October 24, 1889, and subject to changes.

RAILROAD EARNINGS—MONTHLY.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
BURL., OGDEN RAP. & NORTHERN:													
1880.....	184,316	165,170	188,345	141,652	149,504	153,378	143,432	160,160	179,804	204,991	169,330	193,419	2,053,484
1881.....	167,750	124,510	148,551	165,630	205,912	174,351	209,112	221,801	221,748	202,180	232,812	2,259,037	
1882.....	252,823	225,631	224,107	178,304	199,278	211,257	198,276	224,921	261,439	300,155	278,439	246,062	2,800,679
CENTRAL PACIFIC:													
1880.....	1,800,615	1,070,487	1,373,438	1,356,716	1,778,488	1,724,990	1,840,067	1,973,438	1,994,997	1,120,229	2,199,466	1,905,221	20,508,113
1881.....	1,602,907	1,454,218	1,709,638	1,872,370	2,091,411	2,159,382	1,899,346	2,088,519	2,185,303	2,507,857	2,207,971	2,225,179	21,094,101
1882.....	1,839,409	1,720,673	1,969,737	2,054,687	2,342,298	2,229,105	2,076,648	2,350,557	2,495,445	2,424,549	2,242,000	1,968,000	25,713,150
CHESAPEAKE AND OHIO:													
1880.....	209,335	198,681	222,762	221,559	199,443	214,352	238,236	259,110	247,303	211,820	240,795	218,009	2,674,308
1881.....	162,540	124,389	228,479	227,371	252,235	241,135	225,006	262,858	247,144	236,306	230,022	203,562	2,702,762
1882.....	210,455	209,708	208,981	267,454	255,939	260,753	306,831	371,175	332,219	347,882	287,850	.....	.....
CHICAGO AND ALTON:													
1880.....	534,054	497,013	626,473	548,961	616,128	617,524	708,906	761,120	767,349	785,199	696,776	574,695	7,718,198
1881.....	487,890	461,641	529,915	558,190	548,556	635,860	676,205	769,571	771,844	672,349	646,812	7,557,741	
1882.....	579,447	530,480	584,483	561,787	553,412	613,886	671,537	800,624	881,109	812,032	748,151	699,323	8,211,988
CHICAGO AND NORTHWESTERN:													
1880.....	1,154,632	1,131,683	1,361,725	1,294,573	1,875,608	1,671,177	1,699,686	1,767,938	2,020,245	2,105,217	1,855,622	1,477,902	19,416,007
1881.....	1,240,664	963,204	1,178,795	1,474,612	1,879,006	2,306,440	1,993,032	2,315,164	2,321,098	2,316,133	1,905,490	2,102,762	21,094,101
1882.....	1,644,935	1,474,176	1,672,931	1,668,747	2,110,947	2,022,700	2,025,736	2,099,755	2,497,053	2,532,100	2,069,287	1,718,379	23,828,973
CHICAGO, BURLINGTON AND QUINCY:													
1880.....	1,432,740	1,411,870	1,732,518	1,489,894	1,909,627	1,682,956	1,773,643	1,834,321	1,862,285	1,934,762	1,837,860	1,552,018	20,454,494
1881.....	1,034,821	1,034,821	1,418,149	1,574,371	1,679,455	2,083,803	1,888,358	2,173,045	2,262,981	2,031,001	1,816,133	1,505,490	21,324,150
1882.....	1,658,834	1,457,300	1,566,217	1,530,838	1,505,261	1,437,164	1,625,006	2,086,858	2,186,400	2,270,444	2,199,421	.....	.....
CHICAGO, MILWAUKEE AND ST. PAUL:													
1880.....	764,298	738,749	906,675	871,041	1,134,745	1,037,958	1,026,708	991,297	1,257,677	1,493,680	1,472,037	1,397,308	13,086,119
1881.....	990,847	882,717	916,989	916,989	1,358,491	1,729,811	1,568,701	1,078,301	1,644,679	1,591,052	1,569,597	1,854,269	17,025,456
1882.....	1,435,000	1,377,000	1,561,000	1,518,000	1,620,000	1,620,000	1,465,000	1,545,000	1,950,000	2,251,000	2,072,000	1,964,000	20,386,999
CHICAGO, ST. PAUL, MINNEAPOLIS AND OMAHA:													
1880.....	193,827	173,078	259,783	259,808	232,146	218,093	236,995	251,013	300,833	342,052	348,894	312,173	3,122,097
1881.....	257,786	158,594	251,648	261,211	350,124	404,562	383,202	385,586	373,379	379,029	392,921	432,615	3,981,296
1882.....	307,498	315,106	405,779	356,558	406,420	363,109	331,480	394,555	482,997	546,671	571,595	537,795	4,973,052
CINCINNATI, INDIANAPOLIS, ST. LOUIS AND OHIO:													
1880.....	135,697	172,541	198,220	168,199	186,995	200,332	204,128	233,478	343,627	239,881	209,014	198,254	2,412,186
1881.....	182,523	171,511	191,005	183,719	191,056	192,299	177,161	229,858	228,653	221,320	211,014	195,809	2,296,910
1882.....	200,042	186,879	208,066	204,269	199,110	192,299	209,564	.....	259,979	.....	179,732	189,956	2,645,513
DENVER AND RIO GRANDE:													
1880.....	124,759	126,922	160,883	164,822	193,225	295,455	373,132	406,133	406,583	473,318	408,562	349,196	3,478,007
1881.....	307,476	317,681	398,493	433,111	514,767	584,230	548,284	606,193	589,287	638,432	547,055	624,728	6,206,812
1882.....	491,214	412,987	559,917	514,298	537,462	495,797	552,702	574,640	595,306	630,598	626,728	6,249,857	
HEMPHIL AND ST. JOSEPH:													
1880.....	176,079	166,965	210,061	206,735	191,317	179,396	224,312	238,081	233,448	242,214	207,147	279,635	2,561,366
1881.....	154,401	122,874	176,358	190,812	172,950	190,740	201,899	210,240	215,103	231,913	195,607	180,379	2,230,691
1882.....	125,001	122,691	162,475	151,999	147,526	184,600	.....	254,569	239,732	238,563	249,252	239,891	2,303,388
ILLINOIS CENTRAL:													
1880.....	595,212	613,806	613,008	535,732	665,120	681,736	724,095	732,755	806,836	880,211	783,120	673,128	8,304,812
1881.....	631,281	524,499	557,780	602,493	673,259	803,887	720,004	868,407	828,847	815,238	737,218	763,475	8,586,397
1882.....	746,744	697,274	686,228	640,412	674,749	663,746	752,223	813,600	828,298	865,325	752,144	697,051	8,831,221
INDIANA, BLOOMINGTON AND WESTERN:													
1880.....	80,498	89,690	116,185	90,374	85,733	106,954	103,438	116,732	110,622	121,343	96,621	104,619	1,233,079
1881.....	90,283	83,261	190,085	203,677	200,004	199,810	199,125	272,114	247,932	225,678	200,450	192,622	2,487,599
1882.....	195,824	175,755	206,835	205,934	186,13	200,072	202,122	278,814	273,100	269,046	256,998	205,212	2,641,675
LOUISVILLE AND NASHVILLE:													
1880.....	674,455	575,035	618,593	563,883	655,014	976,229	772,538	827,089	931,911	1,000,327	953,087	949,185	9,491,346
1881.....	812,118	805,124	947,959	855,704	828,726	1,227,885	817,735	876,192	951,566	1,002,950	1,065,223	1,153,779	11,344,361
1882.....	964,527	960,315	1,068,834	933,603	958,130	1,215,490	1,063,765	1,043,912	1,114,513	1,215,932	1,192,390	1,221,215	12,981,140
MONTANA AND OHIO:													
1880.....	250,116	204,095	168,302	140,091	129,248	121,855	131,621	184,593	240,593	264,714	251,268	287,372	2,273,622
1881.....	224,347	216,768	230,916	163,551	145,803	136,517	135,549	160,789	210,262	256,924	262,986	287,612	2,403,224
1882.....	159,676	158,590	182,166	141,957	134,378	131,184	135,174	137,475	157,874	267,433	295,110	307,643	2,179,666
NASHVILLE, CHATTANOOGA AND ST. LOUIS:													
1880.....	205,634	191,154	169,457	135,466	158,839	144,130	151,594	169,326	167,473	178,266	182,087	175,966	2,049,484
1881.....	178,143	190,866	207,710	183,525	104,430	154,549	150,430	168,317	179,979	172,121	173,127	175,943	2,075,943
1882.....	156,994	159,691	161,005	154,155	135,556	119,074	160,991	168,304	168,999	180,319	181,336	261,082	3,468,109
NEW YORK AND NEW ENGLAND:													
1880.....	164,232	149,907	183,845	179,689	183,701	189,891	205,056	249,885	235,642	215,491	210,856	198,108	2,306,308
1881.....	189,749	173,614	212,019	216,913	217,185	231,518	246,821	280,524	299,573	261,206	240,764	240,063	2,809,255
1882.....	213,840	217,261	265,222	261,041	289,722	295,392	289,441	346,490	336,347	310,145	276,183	.....	.....
NEW YORK, LAKE ERIE AND WESTERN:													
1880.....	1,147,173	1,207,391	1,356,780	1,372,755	1,350,574	1,230,419	1,273,533	1,450,223	1,492,497	1,713,697	1,515,835	1,398,228	16,500,127
1881.....	1,296,381	1,252,218	1,644,958	1,643,151	1,592,544	1,661,812	1,580,976	1,606,874	1,786,417	1,799,310	1,726,788	1,726,788	19,149,161
1882.....	1,443,437	1,425,765	1,847,261	1,709,057	1,776,891	1,794,982	1,787,081	1,772,895	1,734,200	1,814,866	1,715,469	.....	.....
NORTHERN CENTRAL:													
1880.....	334,494	330,860	415,325	386,130	320,788	419,193	450,298	453,923	464,093	512,918	459,054	494,310	5,030,397
1881.....	386,157	382,637	452,906	467,273	405,888	477,287	440,811	498,008	499,505	467,160	476,622	476,622	5,443,576
1882.....	407,368	413,551	430,194	435,129	422,607	428,762	509,683	667,488	592,435	550,225	526,685	490,003	5,800,176
NORTHERN PACIFIC:													
1880.....	81,390	77,259	119,357	125,700	217,613	253,105	241,277	223,500	330,300	353,455	300,822	220,993	2,629,710
1881.....	116,508	78,803	122,984	126,210	212,705	412,024	393,260	434,085	534,363	583,956	475,610	399,724	4,441,576
1882.....	245,369	268,935	373,141	451,023	616,231	704,617	694,067						

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By this means we get the largest percentage of circulation of air, which keeps the bars cool and prevents them from burning or warping. There is also fully ten per cent of fuel saved, as it does away with the necessity of opening the furnace door and shaking the fire, and thus preventing large volumes of cold air rushing in and producing sudden expansions and contractions, frequently blistering the bottom of the boiler.

This bar has two very superior qualities which no shaking grate ever possessed. The first is a large friction roller at each end of the bar, thus enabling it to be moved back and forth with the greatest ease, though the bar be ever so large and heavy. The second is the header at the end of every bar, thus absolutely protecting the bar from all obstructions of coal and clinkers, that otherwise might get at the end of the bar and stop its working. This header also affords plenty of expansion and contraction room for the bars. The first set of these bars ever made has been in constant use for some four and one-half years, without any expense except first cost, and the party using them prefers them to any other bar in use.



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RAILROAD, TRAMWAY AND CANAL DIVIDEND STATEMENT

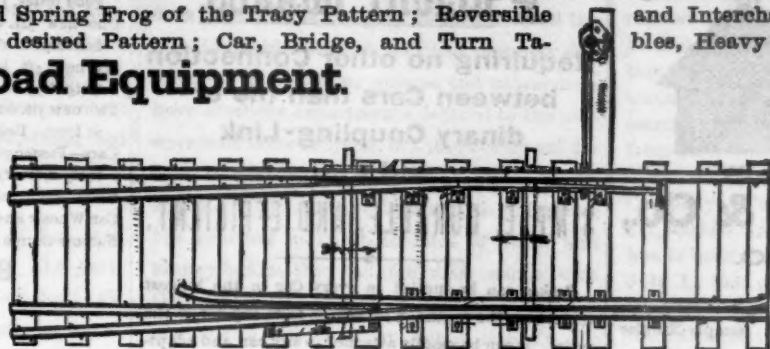
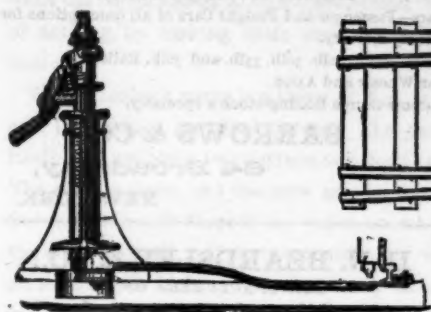
Showing the amount of Stock Outstanding, the Dividend Periods and the date of last Dividend.

Marked thus (*) are leased roads.	Stock outstanding.	Divide'd Periods.	Last Dividend Payable.	Marked thus (*) are leased roads.	Stock outstanding.	Divide'd Periods.	Last Dividend Payable.	Marked thus (*) are leased roads.	Stock outstanding.	Divide'd Periods.	Last Dividend Payable.
Albany and Susq.*.....100	2,30,000	semi-an	Jan. '83	Little Miami.....50	4,637,300	q'terly	Dec. '82	Ware River.....100	750,000	semi-an.	Jan. '83 3/4
Atch., Top. and S. Feor.	4,00,000	q'terly	Feb. '83 1/4	Little Rock & Ft. S.....100	4,096,135	.....	July '81 100	Warren (N. J.).....100	1,800,000	semi-an.	Oct. '82 3/4
Atlanta and W. Point	1,32,200	semi-an	Aug. '82 6	Little Schuylkill.....50	2,646,100	semi-an.	Jan. '83 3/4	Warwick Valley.....100	340,000	semi-an.	July '82 2 1/2
Atlantic and St. Law.*100	840,000	semi-an	Sept. '82 3	Long Island.....100	10,000,000	q'terly	Feb. '83 1	Westchester & Phil. pref.100	821,300	semi-an.	July '80 2
Augusta and Savannah	222,900	semi-an	Dec. '82 3 1/4	Louisville & Nashv.....100	25,000,000	semi-an.	Feb. '82 3	West Jersey.....100	1,359,750	semi-an.	Sept. '82 3
Avon, Genesee & M. M.*100	1,792,566	semi-an	Jan. '82 3	Lowell & Andover.....100	500,000	semi-an.	Jan. '83 3 1/4	Wilmingt'n & Weld.....100	1,456,200	semi-an.	Jan. '83 3
Baltimore and Ohio.....100	5,000,000	semi-an	Jan. '83 3	Lykens Valley.....100	600,000	q'terly	Jan. '82 2 1/4	Wil., Col., & Aug.....100	960,000	semi-an.	Jan. '83 3
" " pref.100	1,650,000	semi-an	Nov. '82 5	Maine Central.....100	3,603,300	semi-an.	Feb. '83 2 1/4	Winchester & Poto.*100	180,000	semi-an.	Jan. '83 3
Berkshire.....100	600,000	q'terly	Apr. '82 1 1/4	Manchester & Law.....00	1,000,000	semi-an.	Nov. '82 5	Winchester & Strasb.*100	74,700	semi-an.	Jan. '83 3
Boston and Albany.....100	20,000,000	q'terly	Dec. '82 2	Manhattan.....100	13,000,000	q'terly	Jan. '83 1 1/4	Worcester & Nashua. 75	1,789,800	semi-an.	Jan. '83 1 1/4
Bos. & N. Y. Air Line pl.100	2,795,227	q'terly	June '82 1	" " 1st pref.100	6,500,000	q'terly	Jan. '83 1 1/4	TRAMWAYS.			
Bos., Ol., T. & N. B. pref.100	1,750,100	semi-an	Oct. '82 3 1/4	" " 2d pref.100	6,500,000	q'terly	Jan. '83 1 1/4	Albany City.....100	300,000	annual	.....'80 5 1/4
Bos., Conc. & Mont. p.100	800,000	semi-an	Nov. '82 3	Massachusetts.....100	2,306,600	semi-an.	Feb. '83 4	Baltimore City.....25	1,000,000	semi-an.	Jan. '83 3
Boston and Lowell.....5	3,940,000	semi-an	Jan. '83 2 1/4	Metropolitan.....100	400,000	semi-an.	Oct. '82 3 1/4	Balt., Cat. & El. Mills.....100	80,000	semi-an.	Jan. '82 3 1/4
Boston and Maine.....5	6,921,274	semi-an	Nov. '82 4	Michigan Central.....100	2,259,026	q'terly	Oct. '82 1 1/4	Bleeker St. & Ful. F. 7.100	900,000	semi-an.	July '82 2 1/4
Boston & Providence	4,000,000	semi-an	Nov. '82 4	Middlesex Central.....100	18,738,204	semi-an.	Feb. '83 2	Boston & Chelsea pref.50	110,000	semi-an.	Oct. '82 3
Attleborough Br.....1	131,700	semi-an	Jan. '83 3 1/4	Mill Creek & Minehill* 50	323,000	semi-an.	Jan. '83 5	Broadway (Brooklyn)100	250,000	q'terly	Oct. '82 6
Bos., Beav. & Lynn.....1	190,400	semi-an	Jan. '83 3	M. Hill & Schuyl. Hav* 50	4,022,500	semi-an.	Jan. '83 3 1/4	B'way & 7th Av. (N. Y.)100	2,100,000	q'terly	Oct. '82 2
Buffalo, N. Y. & Erie.....1	950,000	semi-an	Dec. '82 3	Missouri Pacific.....100	28,169,800	q'terly	Jan. '83 1 1/4	B'lyn & Hunter's Pt.100	400,000	semi-an.	Oct. '82 6
Buff. Pitts. & West. pl.50	1,457,000	.....	Jan. '83 3	Mobile & Montgomery100	3,022,517	semi-an.	Feb. '80 2 1/4	Brooklyn City.....100	2,000,000	q'terly	Nov. '82 3 1/4
Camden & Atlantic.....50	377,400	q'terly	Nov. '82 4	Morris and Essex.....50	15,000,000	semi-an.	Jan. '83 3 1/4	Bushwick (Brooklyn)100	309,000	semi-an.	Oct. '82 6
" " pref.50	880,650	q'terly	Nov. '82 4	Mt Carbon & P. Carbon50	282,350	semi-an.	Jan. '83 6	Cambridge.....100	908,000	q'terly	Oct. '82 4 1/4
Camden & Burl. Co.....100	381,925	semi-an	Jan. '83 3	Nashua and Lowell.....100	800,000	semi-an.	Nov. '82 4	Can. Park N. & E. Riv.100	1,800,000	q'terly	Oct. '82 6
Canada Southern.....100	15,000,000	.....	Feb. '81 2 1/4	Nashua & Rochester.....100	1,305,800	semi-an.	Oct. '82 1 1/4	Christoph. & Tenth St.100	650,000	semi-an.	Aug. '82 2 1/4
Cape May & Millville.....50	447,000	semi-an	Dec. '82 3	Nashv. & Decatur.....100	1,827,000	semi-an.	June '82 3	Citizens' (Phil.).....50	192,500	q'terly	Jan. '82 2 1/4
Catawissa.....50	1,150,500	annual	Oct. '82 2 1/4	Nashv., Chat. & St. Louis25	6,670,325	semi-an.	Apr. '82 1 1/4	Citizens' (Phg.).....50	200,000	annual	.....'80 14 1/4
" " pref.50	2,200,000	semi-an	Nov. '82 3 1/4	Naugatuck.....100	2,000,000	semi-an.	Jan. '83 5	Coney Island & Bklyn100	500,000	semi-an.	Oct. '80 5
" " new pref.50	1,000,000	semi-an	Nov. '82 3 1/4	Neaquehoning Val.* 50	1,300,000	semi-an.	Sept. '82 3	Continental (Phil.).....50	580,000	semi-an.	Jan. '83 6
Cayuga and Susq.*.....50	589,120	semi-an	Jan. '83 4 1/4	N. Castle & Beaver Val* 50	600,000	q'terly	Oct. '82 1	D. Dock, E. B'way & Batco100	1,200,000	q'terly	Aug. '82 4
Cedar Rapids & Mo. R.100	6,850,400	q'terly	Feb. '83 1 1/4	New London North*100	1,500,000	q'terly	Jan. '83 1 1/4	Elgin Av. (N. Y.).....100	1,000,000	q'terly	Oct. '82 3
" " pref.100	769,600	semi-an	Feb. '83 3 1/4	N. Y. Cen. & Hud. R.100	89,428,330	q'terly	Jan. '83 2	42d St. & G. St. Ferry100	747,000	semi-an.	May '82 6
Central of Georgia.....100	7,500,000	semi-an	Dec. '82 4	N. Y. & Harlem.....100	7,950,000	q'terly	Jan. '83 2 1/4	Frankl. & Southw (Ph) 50	600,000	q'terly	Oct. '82 6
Central of New Jersey.....100	18,563,300	q'terly	July '76 2 1/4	" " pref.100	1,500,000	q'terly	Jan. '83 4	Germantown, (Ph.).....50	1,540,902	q'terly	Jan. '83 2 1/4
Central Ohio.....50	2,437,950	semi-an	Jan. '83 3	" " City Line.....	1,000,000	annual	Apr. '82 3	Girard College (Ph.).....50	500,000	semi-an.	July '71 3
" " pref.50	411,550	semi-an	Jan. '83 3	N. Y. Lack. & West.....100	10,000,000	q'terly	Jan. '83 1 1/4	Grand St. & Newton.100	170,091	semi-an.	July '82 2 1/4
Central Pacific.....100	59,275,500	semi-an	Feb. '83 3	N. Y., Lake Erie & West.100	77,087,600	.....	Jan. '83 1 1/4	Green & Coates St. (Ph) 50	708,650	q'terly	Jan. '83 3
Chesapeake preferred.....100	2,155,300	semi-an	Jan. '83 1 1/4	" " pref.100	7,987,500	annual	Jan. '83 6	Heston, Mantal & Fm 50	209,381	q'terly	Jan. '75 4
Chicago and Alton.....100	11,181,741	semi-an	Mar. '83 4	N. Y., N. H. & Hart.....100	15,500,000	semi-an.	Jan. '83 6	Highland.....100	600,000	semi-an.	Jan. '82 4
" " pref.100	2,245,400	semi-an	Mar. '83 4	N. Y. Prov. & Boston100	3,000,000	q'terly	Feb. '83 2	Lomb. & South St. (Ph) 25	195,000	semi-an.	Oct. '75 4
Chi., Burl. & Quincy.....100	69,508,105	q'terly	Mar. '83 2	Ning. Bridge & Canand*100	1,000,000	semi-an.	Oct. '82 3	Lynn and Boston.....100	200,000	semi-an.	Nov. '82 4
Chi., Iowa & Nebras.....100	3,916,300	semi-an	Jan. '83 4	North Carolina.....100	3,000,000	semi-an.	Mar. '83 3	Malden and Melrose.....100	165,000	.....	.....
Chi., Mil. & St. Paul.....100	20,404,261	semi-an	Oct. '82 3 1/4	" " pref.100	1,000,000	semi-an.	Mar. '83 3	Metropolitan (Bost.).....100	1,500,000	semi-an.	Jan. '83 4
" " pref.100	14,401,483	semi-an	Oct. '82 3 1/4	Norfolk & Western pref.100	15,000,000	q'terly	Dec. '82 1 1/4	Middlesex (Boston).....100	650,000	semi-an.	Nov. '82 3 1/4
Chi. & N. Western.....100	14,988,257	semi-an	Dec. '82 3 1/4	North Pennsylvania.....50	4,587,150	q'terly	Feb. '83 1 1/4	N. Y. Bay Ridge & Jam.100	150,000	.....	Oct. '78 7
" " pref.100	21,525,353	q'terly	Feb. '83 1 1/4	Northern Central.....50	6,142,000	semi-an.	Jan. '83 4	Ninth Av. (N. Y.).....100	797,380	.....	.....
Chi., B. I. & Pacific.....100	41,960,000	q'terly	Feb. '83 1 1/4	Northern N. Hampshire100	6,142,000	semi-an.	Dec. '82 3	Orange & Newark.....100	282,555	.....	.....
Chi. and West Mich.....100	6,151,000	q'terly	Jan. '83 3	Northern Pacific pref.100	3,068,400	.....	Jan. '83 11.1	People's (Phila.).....100	115,250	.....	July '82 2
Chi., St. P. M. & O. pref.100	10,390,000	q'terly	Jan. '83 1 1/4	Norwich & Worcester*100	41,909,132	semi-an.	Jan. '83 1 1/4	Philadelphia City.....25	475,000	semi-an.	July '82 4
Cin., Ham. & Dayton.....100	3,500,000	semi-an	Jan. '83 3	Oregon & Transcon. l.100	2,604,400	q'terly	Jan. '83 1 1/4	Phila. and Darby.....20	200,000	semi-an.	July '81 3 1/4
Cin., Ind. St. L. & Chi.100	6,000,000	q'terly	Jan. '83 1 1/4	Old Colony.....100	40,000,000	q'terly	Jan. '83 1 1/4	Phila. & Grey's Ferry.....50	308,000	semi-an.	Jan. '82 6
Cin., Sand. & Cleve. pl.50	429,037	semi-an	Nov. '82 3	Oregon R'way & Nav.100	7,333,800	semi-an.	Jan. '83 3 1/4	Phg. Alleg. & Manches.....50	300,000	q'terly	Oct. '81 3
Clev., Col. & Ind.....100	14,991,800	.....	Feb. '82 3	Oswego & Syracuse.....100	18,000,000	q'terly	Feb. '83 2 1/4	Ridge Avenue (Ph.).....50	420,000	semi-an.	Oct. '81 11
Clev. & Pittsburg*.....50	11,244,336	q'terly	Mar. '83 1 1/4	Panama.....100	1,320,400	semi-an.	Jan. '83 6 1/4	Second Avenue (N. Y.)100	1,199,500	semi-an.	July '82 4
Columbus & Xenia.....50	1,786,200	q'terly	Dec. '82 2	Paterson & Hudson*100	7,000,000	semi-an.	Jan. '83 6 1/4	Second & Third St. (Ph) 50	771,076	q'terly	Jan. '83 4
Col., Hock. Val. & Tol.100	10,316,500	.....	Jan. '83 2 1/4	Paterson & Ramapo.....100	630,000	semi-an.	Jan. '83 4 1/4	17th & 19th sts (Ph.).....50	250,000	semi-an.	July '81 3
Concord.....100	1,500,000	semi-an	Nov. '82 5	Pemb. & Hightst*.....50	248,000	semi-an.	Jan. '83 3	Sixth Avenue (N. Y.)100	750,000	semi-an.	May '82 5
Concord and Ports.*100	350,000	semi-an	Jan. '83 3 1/4	Pennsylvania.....100	342,150	semi-an.	Nov. '82 4 1/4	Somerville (Boston).....100	113,000	semi-an.	Nov. '82 3
Conn. & Passump. Riv.100	2,244,400	semi-an	Feb. '83 3	Pennsylvania Co.....100	83,786,570	semi-an.	Nov. '82 4 1/4	South Boston.....50	600,000	semi-an.	Jan. '83 4
Connecticut River.....100	2,100,000	semi-an	Jan. '83 4	Pennsylvania Co.....100	20,000,000	annual	Dec. '82 4	Third Avenue, N. Y.....100	2,000,000	q'terly	Aug. '82 3
Cumberland Valley.....50	1,292,950	q'terly	Jan. '83 2 1/4	Peoria & Bureau Val*100	1,200,000	semi-an.	Feb. '83 4	13th and 16th sts. Ph 50	334,529	q'terly	Jan. '83 4
" " 1st pref.50	243,900	semi-an	Oct. '82 4	Philadelphia & Erie*.....	7,013,700	semi-an.	.....	23d street, N. Y.....100	600,000	semi-an.	Aug. '82 4
" " 2d pref.50	243,000	semi-an	Oct. '82 4	Phil. Ger. & Norrist*.....	2,400,000	semi-an.	Jan. '75 4	Union, Boston.....100	374,300	semi-an.	Jan. '82 4
Danbury & Norwalk.....50	600,000	.....	Oct. '82 1 1/4	Phil. and Reading.....50	2,231,900	q'terly	Dec. '82 3	Union, Phila.....100	1,005,000	semi-an.	Jan. '80 7
Dayton and Mich.....50	2,408,573	semi-an	Oct. '82 1 1/4	" " pref.50	32,726,375	q'terly	Jan. '76 2 1/4	West Philadelphia.....50	750,000	semi-an.	July '77 10
" " pref.50	1,211,250	q'terly	Jan. '83 3	Phila. and Trenton.....100	1,250,100	q'terly	Jan. '83 2 1/4	CANALS.			
Delaware.....25	1,468,940	semi-an	Jan. '83 3	Phila., Wil. and Balt.....100	11,585,750	semi-an.	Jan. '83 4	Chesapeake and Dela.....50	2,078,038	semi-an.	June '75 2
Del. & Bound Brook*100	1,632,000	q'terly	Feb. '83 1 1/4	Pittab., Ft. W. & Chi.....100	10,714,285	q'terly	Jan. '83 1 1/4	Delaware Division.....50	1,633,350	semi-an.	Feb. '83 2
Del., Lack. & Western.....100	26,200,000	q'terly	Jan. '83 2	" " Special Imp.100	6,750,000	q'terly	Jan. '83 1 1/4	Delawa. and Hudson100	20,000,000	q'terly	Dec. '82 1 1/4
Denver & Rio Grande.....100	29,160,000	q'terly	Jan. '82 1 1/4	Pittsfield & N. Adams.....100	479,900	semi-an.	Jan. '83 2 1/4	Delaware & Raritan*100	5,847,400	q'terly	Jan. '82 2 1/4
Detroit, Lans. & Nor.....100	1,585,600	semi-an	Feb. '83 3	Portl., Saco & Portsm.....100	1,500,000	semi-an.	Jan. '83 3	Lehigh Canal and Nav.....50	11,204,250	semi-an.	Dec. '82 2
" " pref.100	2,508,380	semi-an	Feb. '83 3 1/4	Providence & Worcester.....100	2,000,000	semi-an.	Jan. '83 3	Monongahela Nav.....50	1,004,500	semi-an.	Jan. '83 3 1/4
Dubuque & Sioux O*.....100	5,000,000	semi-an	Oct. '82 3	Rensselaer & Saratog*100	7,000,000	semi-an.	Jan. '83 4	Morris, consolidated.....100	1,025,000	semi-an.	Aug. '82 2
East Pennsylvaniana.....50	1,709,550	semi-an	Jan. '83 3	Richmond & Danv.....100	5,000,000	q'terly	Aug. '82 2	" " preferred.....100	1,175,000	semi-an.	Aug. '82 5
East Mahanoy.....50	392,950	semi-an	Jan. '83 3	Richmond & Petersb.....100	1,009,300	semi-an.	Aug. '82 2	Pennsylvania.....50	4,501,200	.....	.....
Eastern (N. H.).....100	492,500	semi-an	Dec. '82 2 1/4	Rhode & Genesee Val*100	555,200	semi-an.	Jan. '83 3	Schnyl. Nav., com.*.....50	859,100	annual.	Oct. '82 500
Eel River.....100	3,000,000	q'terly	Dec. '82 3 1/4	Rome Water & Ogdens.....100	5,293,900	.....	Jan. '83 3	" " pref.50	3,200,000	annual.	Oct. '82 5 1/4
Elmira & Williams*.....50	500,000	semi-an	Nov. '82 1 1/4	Rutland preferred.....100	4,000,000	semi-an.	Sept. '82 1	MISCELLANEOUS.			
" " pref.50	500,000	semi-an	Jan. '83 3 1/4	Spartanburg & Pt. M.100	989,000	semi-an.	Jan. '83 4	Adams Express.....100	12,000,000	q'terly	Dec. '82 2
Erie and Pittsburg.....50	1,998,400	q'terly	Dec. '82 1 1/4	St. L., Alt. & T. Haute.....100	2,300,000	.....	Dec. '82 4	American Express.....50	18,000,000	semi-an.	Jan. '83 3
Evansville & Terre H.100	100,000	semi-an	Jan. '83 6 1/4	" " pref.10							

THE RAMAPO IRON WORKS,

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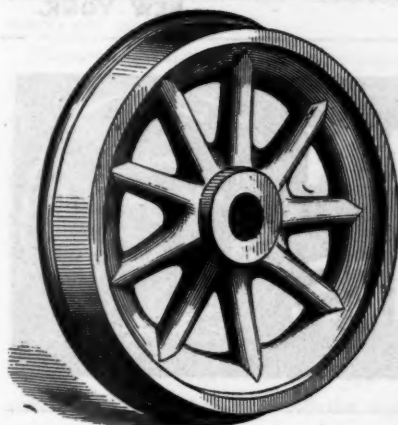
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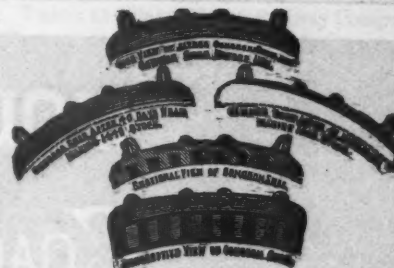
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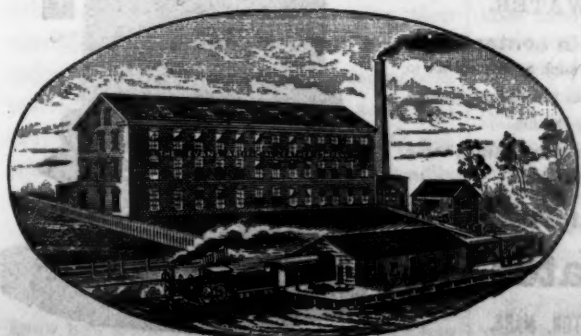


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Brakes can be applied to every Car in the longest train, from the engine or caboose, or from any car in the train. It can be readily attached to any car, and adapted to ordinary brake beams, shoes, etc. There is no possibility of damaging wheels by "sliding."

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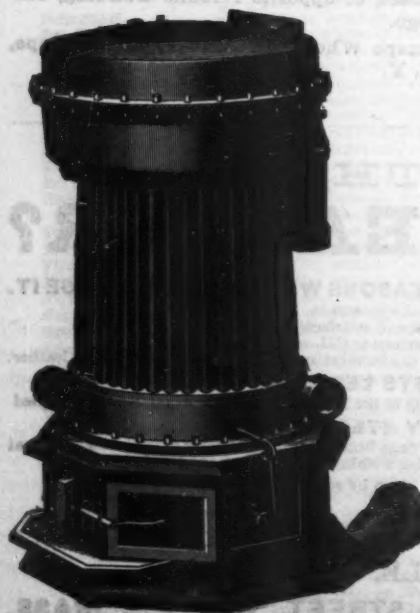
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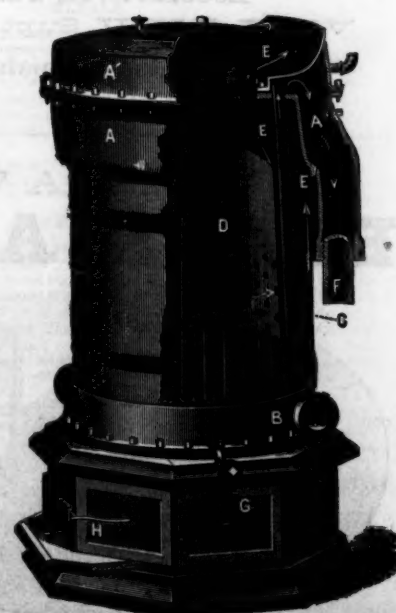
The Water Tubes do not come in contact with the Coals, but occupy the Smoke Flue in such a manner as to absorb the greatest amount of heat from Coal in a low State of combustion without danger of chilling the fire.

At the last "Mechanics' Fair" it received the Silver Medal, being the highest award to heaters of any kind.

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FINANCIAL DEPARTMENT.

THE FAULT OF EDUCATION.

A PAMPHLET was recently sent us entitled "What, Do You Greenbackers Want Anyway?" presumably issued in the interest of the Greenback party. After a perusal of this document we should say that the Greenbackers want the Government to create something out of nothing, by making their currency actual money.

The Greenback party is a thing of the past, and their issues are dead issues. The party itself still maintain an existence and that is all. The ship is there, and the crew are on board, but unfortunately there is no water on which the craft may sail. At last accounts she was stranded up in Maine; where her early breaking up can with confidence be predicted. It is not our intention to aid in floating this stranded vessel, but this issue of this Greenback circular suggests a few thoughts on the subject of an educational deficiency that marks our common schools.

Financial heresies such as were propagated by the late Greenback party are invariably the outgrowth of periods of financial and commercial depression. No country is safe from the occasional attacks of that financial epidemic known as hard times, and like contagious fevers it will run its course despite the wisest exercise of statesmanship and finance. The agitation of such wild-cat schemes as those of the Greenbackers in order to check this depression is analogous to the superstitious practices of negroes to ward off the approach of diseases which imperil them. In both cases ignorance is the primary cause of action, an ignorance which in the case of the Greenbacker is shared by nine-tenths of his fellow men, though they may not affiliate with him in his political views. It is doubtful if a single Greenbacker can define the significance of the words *money* and *value*, and in the rank and file of other parties the same dense ignorance prevails.

This state of affairs should excite no surprise. The schools of our country ignore the subjects of value and money, deeming their scholars sufficiently acquainted with the intricacies of exchange when they can repeat with parrot-like precision, "ten mills make one cent; ten cents make one dime;" etc. If you ask them to define a dollar, they will readily answer "one hundred cents," if to define a cent, "ten mills," but ask them what a mill is and the source of their information no longer contributes to their knowledge. They know how much a cent is, and what it may buy

but have not the faintest conception of *what* it is or of what money is in the abstract, and this ignorance is solely attributable to the wretched text-books that our schools employ.

We do not ask that common school children should be thoroughly instructed in all the minute ramifications of political economy and science. Many of our colleges and universities have excellent departments devoted to the pursuance of these subjects, but there is no call for them in our ordinary public and private schools. It would be sufficient in these schools, to instruct the scholars in the principles of value and money before they burden their minds with the equivalence of current denominations. A competent arithmetician could embody the whole subject with clearness and comprehension in a few pages, after studying which his pupils would know that a dollar had a wider signification than ten dimes or a hundred cents and that a pound sterling meant more than twenty shillings. Thoroughly instructed in these rudiments of political economy the growing generation would arrive at manhood free from an ignorance which now prevails; and their adoption of such absurd views as are enunciated in the mis-called principles of the Greenback party would be impossible.

Financial Review.

WEDNESDAY EVENING, MARCH 7, 1883.

THE rates for call loans, on stocks as collateral, during the forenoon, were 7, 8 and 9 per cent. After 12.30 the rates were 8 and 9 per cent; and in the last hour of business were successively 10, 11 and 7 per cent.

The posted rates for foreign exchange were 4.81½@4.84. The actual rates were as follows, viz: Sixty-day bills, 4.80½@4.81; Demand, 4.83@4.83½; Cables, 4.83½@4.84; Commercial bills were 4.79@4.79½. Continental bills were as follows, viz: France, 5.23½@5.23½ and 5.21½@5.20½; Reichsmarks, 94½@½ and 94½@½ and 94½@½; Guilders, 39½@40.

The gross earnings of the Northern Central Railway, for the year ending December 31, 1882, were \$5,800,176.03, the operating expenses \$3,842,323.05, and the net earnings \$1,957,852.98—showing an increase, compared with the year 1881, in gross earnings of \$356,476.03 or 6.55 per cent, in operating expenses of \$44,877.14, or 1.45 per cent, and in net earnings of \$301,598.89, or 18.21 per cent. The total number of passengers carried in 1882, was 2,590,582, against 2,430,192 in 1881, an increase of 160,420, or 6.60 per cent. The passenger mileage increased 6.86 per cent, and the revenue derived therefrom increased \$77,235.39 or 9.55 per cent, showing a net profit per mile of 2.44 miles, as compared with a profit in 1881 of 1.85 miles.

The Governors of the New York Stock Exchange have admitted to dealing at the Board the following securities:—

New York, Lackawanna and Western Railroad Co.—Capital stock guaranteed 5 per cent

\$10,000,000 in shares of \$100 each, and \$12,000,000 first mortgage 6 per cent bonds, due January 1, 1921. The principal and interest of the bonds and dividends of the stock are guaranteed by the Delaware, Lackawanna and Western Company under a lease which was ratified by the stockholders of both companies February 20, 1883. It estimated that to make this property available the Delaware, Lackawanna and Western Company will have to assume further liabilities upon the property of from \$5,000,000 to \$10,000,000.

Buffalo, New York and Philadelphia Railway Company.—Consolidated mortgage bonds for \$11,000,000 on 325 miles of roadway; the bonds bear six per cent interest and are due July 1, 1921; \$4,000,000 of the consols are held by the United States Trust Company for the retirement of a like amount of divisional bonds on 120 miles of road; when these bonds are retired the consols will be a first mortgage upon the whole line.

Albany and Susquehanna Railroad Co.—An additional \$3,000,000 6 per cent bonds due April 1, 1906, issued under and secured by the first consolidated mortgage for \$10,000,000 of April 1876, the previous issue under that mortgage was \$3,000,000 7 per cent bonds in May, 1876; principal and interest are guaranteed by the Delaware and Hudson Canal Company.

Peoria and Pekin Union Railway Company.—First mortgage gold 6 per cent bonds, interest payable quarterly and due February 1, 1921, \$1,500,000; and income mortgage bonds, 6 per cent non-accumulative, due February 1, 1921, and principal payable in gold coin, \$1,500,000.

Atchison, Topeka and Santa Fe Railroad Company.—An additional \$1,500,000 bonds, issued under the indenture of trust with the Boston Safe Deposit and Trust Company, bearing interest at 6 per cent, payable semi-annually and due December 1, 1911.

Oregon Improvement Company.—Capital stock, \$5,000,000 in shares of \$100 each; and first mortgage gold bonds, \$5,000,000, bearing 6 per cent interest, due December 1, 1910, but subject to calls by provisions of a sinking fund trust.

The statement of the business of all the lines of the Pennsylvania Railroad Company east of Pittsburgh and Erie for January, 1883, as compared with the same month in 1882, shows an increase in gross earnings of \$556,036, an increase in expenses of \$159,244, and an increase in net earnings of \$396,792. All lines west of Pittsburgh and Erie for January, 1883, show a surplus over all liabilities of \$174,981, being a gain as compared with January, 1882, of \$132,233.

Bonds to the amount of \$1,800,000 have been disposed of by the managers of the Kentucky Central Railroad, from which enough was realized to pay the bonded indebtedness due March 1, and leave a balance sufficient to complete the road to connect with the Knoxville Extension, East Tennessee, Virginia and Georgia system.

The gross earnings of the Northern Central Railway for the month of January, 1883, were \$499,252.84, the operating and extraordinary expenses \$341,033.41, and the net earnings \$158,219.43, against \$92,608.80 in January, 1882, an increase of \$65,610.63.

THE STOCK EXCHANGES AND MONEY MARKET.

New York Stock Exchange.

Closing Prices for the week ending Mar. 6.

	W.	Th.	F.	S.	Sat.	M.	Tu.	W.
Adams Express.....	133	133	133	133	133	133	133	133
Albany and Susq.....	111	111	111	111	111	111	111	111
1st mortgage.....	111	111	111	111	111	111	111	111
2d mortgage.....	111	111	111	111	111	111	111	111
American Express.....	90 1/2	90	90 1/2	90 1/2	90 1/2	90 1/2	90 1/2	90 1/2
Burl., O. R. & Nor.....	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2
1st mortgage 5s.....	100 3/4	100 3/4	100 3/4	100 3/4	100 3/4	100 3/4	100 3/4	100 3/4
Canada Southern.....	66	66 1/2	66 1/2	66 1/2	66 1/2	67 1/2	66 1/2	66 1/2
1st mortgage guar.....	95	95	95	95	95	94 1/2	95	94 1/2
Canadian Pacific.....	59	59 1/2	58 1/2	59	59	59 1/2	59 1/2	59 1/2
Central of N. Jersey.....	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2
1st mort. 1890.....	113 1/2	113 1/2	113 1/2	113 1/2	113 1/2	113 1/2	113 1/2	113 1/2
7s, consol. ass.....	110	110	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2
7s, convertible ass.....	110	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2	110 1/2
7s, Income.....	110	110	110	110	110	110	110	110
Adjustment.....	106	106	106	106	106	106	106	106
Central Pacific.....	79 1/2	81 1/2	80 1/2	80 1/2	81 1/2	80 1/2	80 1/2	80 1/2
6s, gold.....	113 1/2	113 1/2	113 1/2	113 1/2	113 1/2	113 1/2	113 1/2	113 1/2
1st M. (San Joa.).....	112	112	112	112	112	112	112	112
1st M. (Cal. & Or.).....	112	112	112	112	112	112	112	112
Land grant 6s.....	112	112	112	112	112	112	112	112
Chesapeake & Ohio.....	22 1/2	22	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2
1st pref.....	30	30 1/2	30 1/2	31 1/2	31 1/2	31 1/2	31 1/2	31 1/2
2d pref.....	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2
1st mort., series B.....	91	91 1/2	91 1/2	91 1/2	91 1/2	91 1/2	91 1/2	91 1/2
Chicago and Alton.....	133	133 1/2	133 1/2	133 1/2	134	134 1/2	134 1/2	134 1/2
Preferred.....	133	133 1/2	133 1/2	133 1/2	134	134 1/2	134 1/2	134 1/2
1st mortgage.....	133	133 1/2	133 1/2	133 1/2	134	134 1/2	134 1/2	134 1/2
Sinking Fund.....	133	133 1/2	133 1/2	133 1/2	134	134 1/2	134 1/2	134 1/2
Chi., Bur. & Quincy.....	116 1/2	117 1/2	117 1/2	117 1/2	118 1/2	117 1/2	117 1/2	117 1/2
7s, Consol. 1903.....	126 1/2	126 1/2	126 1/2	126 1/2	126 1/2	126 1/2	126 1/2	126 1/2
Chi., Mil. & St. Paul.....	101 1/2	101 1/2	101 1/2	101 1/2	101 1/2	101 1/2	101 1/2	101 1/2
Preferred.....	119 1/2	120 1/2	120	120	120	118	118	118
1st mortgage, 8s.....	119 1/2	120 1/2	120	120	120	118	118	118
2d mort., 7 3/4.....	119 1/2	120 1/2	120	120	120	118	118	118
7s, gold.....	119 1/2	120 1/2	120	120	120	118	118	118
1st M. (La. C. div.).....	119 1/2	120 1/2	120	120	120	118	118	118
1st M. (I. & M. div.).....	119 1/2	120 1/2	120	120	120	118	118	118
1st M. (I. & D. ext.).....	119 1/2	120 1/2	120	120	120	118	118	118
1st M. (H. & D. div.).....	119 1/2	120 1/2	120	120	120	118	118	118
1st M. (C. & M. div.).....	119 1/2	120 1/2	120	120	120	118	118	118
Consolidated S. F.....	123	123	123	123	123	123	123	123
Chi. & Northwestern.....	132 1/2	132 1/2	132 1/2	132 1/2	133 1/2	131 1/2	131 1/2	131 1/2
Preferred.....	145 1/2	146 1/2	146	146 1/2	147	146 1/2	146 1/2	146 1/2
1st mortgage.....	145 1/2	146 1/2	146	146 1/2	147	146 1/2	146 1/2	146 1/2
Sinking Fund 6s.....	110	110	110	110	110	110	110	110
Consolidated 7s.....	131	131	131	131	131	131	131	131
Consol. Gold bo'ds.....	125	125	125	125	125	125	125	125
Do. reg.....	124 1/2	124 1/2	124 1/2	124 1/2	124 1/2	124 1/2	124 1/2	124 1/2
Chi., B. Ind. & Pac.....	121 1/2	122 1/2	122 1/2	122 1/2	123 1/2	123 1/2	123 1/2	123 1/2
6s, 1917, 0.....	125	125	125	125	124 1/2	124 1/2	124 1/2	124 1/2
Chi., St. P. Minn. & O.....	48 1/2	48 1/2	48	48 1/2	48 1/2	47 1/2	47 1/2	47 1/2
Preferred.....	107	108 1/2	107 1/2	107 1/2	108 1/2	107	107	107
Clev., Col., Cin. & Ind.....	73	73	72 1/2	72 1/2	74 1/2	73 1/2	73 1/2	73 1/2
Clev. & Pittsburg gr.....	138	138	138	138	138	138	138	138
7s, Consolidated.....	129	129	129	129	129	129	129	129
4th mortgage.....	129	129	129	129	129	129	129	129
Col., Chi. & Ind. Cent.....	6	6 1/2	6	7	7 1/2	6 1/2	6 1/2	6 1/2
Del. & Hud Canal.....	106 1/2	107 1/2	106 1/2	107 1/2	107 1/2	108	108	108
Reg. 7s, 1891.....	114 1/2	114 1/2	114 1/2	114 1/2	114 1/2	114	114	114
Reg. 7s, 1884.....	103	103	103	103	103	102 1/2	102 1/2	102 1/2
7s, 1894.....	117	117	117	117	117	117	117	117
Del., Lack. & Western.....	122 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
ad mortgage 7s.....	123 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
Consol. 1907.....	123 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
Erie Railway.....	123 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
1st mortgage.....	123 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
ad mort. 5s, ext.....	123 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
3d mortgage.....	123 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
4th mort. 5s, ext.....	123 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
5th mortgage.....	123 1/2	123 1/2	123 1/2	123 1/2	125 1/2	123 1/2	123 1/2	123 1/2
7s, Consol. gold.....	125 1/2	125 1/2	125 1/2	125 1/2	125 1/2	125 1/2	125 1/2	125 1/2
Great West. 1st mort.....	100	100	100	100	100	100	100	100
ad mortgage.....	100	100	100	100	100	100	100	100
Hannibal & St. Jo.....	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2
Preferred.....	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2
2s, Convertible.....	104 1/2	104 1/2	104 1/2	104 1/2	104 1/2	104 1/2	104 1/2	104 1/2
Houston & Tex. Cen.....	144	144 1/2	143 1/2	143 1/2	143 1/2	143 1/2	143 1/2	143 1/2
1st mortgage.....	108 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2
ad mortgage.....	108 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2
Illinois Central.....	144	144 1/2	143 1/2	143 1/2	143 1/2	143 1/2	143 1/2	143 1/2
Lake Shore & Mich So.....	108 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2
Consol. 7s.....	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2
Consol. 7s, reg.....	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2
ad Consolidated.....	130 1/2	130 1/2	130 1/2	130 1/2	130 1/2	130 1/2	130 1/2	130 1/2
Lch. & W. B. con. ass.....	101 1/2	100 1/2	100 1/2	100 1/2	100 1/2	100 1/2	100 1/2	100 1/2
Long Dock bonds.....	103	103	103	103	103	103	103	103
Louisville & Nash.....	54 1/2	54 1/2	54 1/2	54	54 1/2	53 1/2	53 1/2	53 1/2
7s, Consol. reg.....	116	116	116	116	116	116	116	116
Manhattan.....	45	46	48 1/2	47 1/2	47 1/2	47 1/2	47 1/2	47 1/2
1st pref.....	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2
Met. Elevated.....	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2
1st mortgage.....	96 1/2	96 1/2	96 1/2	96 1/2	96 1/2	96 1/2	96 1/2	96 1/2
Michigan Central.....	93 1/2	94 1/2	94 1/2	94	95 1/2	93 1/2	93 1/2	93 1/2
7s, 1902.....	93 1/2	94 1/2	94 1/2	94	95 1/2	93 1/2	93 1/2	93 1/2
Minn. & St. Louis.....	26	26 1/2	26 1/2	26 1/2	27	26 1/2	26 1/2	26 1/2
Preferred.....	57 1/2	57 1/2	57 1/2	57	60	60	60	60

Morris & Essex.....	123	123 1/2	123 1/2	123 1/2	123 1/2	123 1/2
1st mortgage.....	123	123 1/2	123 1/2	123 1/2	123 1/2	123 1/2
2d mortgage.....	123	123 1/2	123 1/2	123 1/2	123 1/2	123 1/2
7s of 1871.....	122	122	122	122	122	122
7s, Convertible.....	122	122	122	122	122	122
7s, Consolidated.....	122	122	122	122	122	122 1/2
N.Y. Cen. & Hud. R.....	126 1/2	126 1/2	126 1/2	126 1/2	127 1/2	126 1/2
6s, S. F., 1883.....	102	102	102 1/2	102 1/2	102 1/2	102 1/2
6s, S. F., 1887.....	102	102	102 1/2	102 1/2	102 1/2	102 1/2
1st mortgage.....	129 1/2	129 1/2	129 1/2	129 1/2	129 1/2	129 1/2
1st mortgage, reg.....	129 1/2	129 1/2	129 1/2	129 1/2	129 1/2	129 1/2
N. Y. Elevated.....	129 1/2	129 1/2	129 1/2	129 1/2	129 1/2	129 1/2
1st mortgage.....	129 1/2	129 1/2	129 1/2	129 1/2	129 1/2	129 1/2
N. Y. & Harlem.....	200	200	200	200	200	200
1st mortgage.....	200	200	200	200	200	200
1st mortgage, reg.....	200	200	200	200	200	200
N. Y. Lake Erie & W.....	37 1/2	37 1/2	36 1/2	36 1/2	37 1/2	36 1/2
Preferred.....	76	76	76	76	76	76
ad Consolidated.....	96 1/2	97	96 1/2	96 1/2	97	96 1/2
New ad 5s fund.....	95 1/2	95 1/2	95 1/2	95 1/2	95 1/2	95 1/2
N.Y., N. Hav. & Hart.....	119 1/2	119 1/2	119 1/2	119 1/2	119 1/2	119 1/2
1st mortgage.....	119 1/2	119 1/2	119 1/2	119 1/2	119 1/2	119 1/2
Northern Pacific.....	48 1/2	48 1/2	49 1/2	49 1/2	49 1/2	48 1/2
Preferred.....	83 1/2	83 1/2	85 1/2	86 1/2	87	85 1/2
Ohio & Mississippi.....	33 1/2	32 1/2	32 1/2	32 1/2	32 1/2	32 1/2
ad mortgage.....	33 1/2	32 1/2	32 1/2	32 1/2	32 1/2	32 1/2
Consolidated 7s.....	33 1/2	32 1/2	32 1/2	32 1/2	32 1/2	32 1/2
Consol. S. Fund.....	116 1/2	116 1/2	116 1/2	116 1/2	116 1/2	116 1/2
Pacific Mail S. S. Co.....	41	41	41	41	41 1/2	41 1/2
Pacific R. R. of Mo.....	105	105	105	105	105	105
1st mortgage.....	105	105	105	105	105	105
2d mortgage.....	105	105	105	105	105	105
Panama.....	105	105	105	105	105	105
Phila. & Reading.....	53 1/2	54 1/2	54 1/2	54 1/2	54 1/2	53 1/2
Pitts.Ft.W.&Ohi.gtd.....	135	135	135	135	136 1/2	135
1st mortgage.....	135	135	135	135	136 1/2	135
2d mortgage.....	135	135	135	135	136 1/2	135
3d mortgage.....	135	135	135	135	136 1/2	135
Pullman Palace Car.....	119 1/2	119 1/2	120 1/2	119 1/2	119 1/2	120
Quicksil'r Min'g Co.....	9	9	9	9	9	9
Preferred.....	43 1/2	44	44	46	46 1/2	46 1/2
St. Louis & San Fran.....	29 1/2	29 1/2	29 1/2	29 1/2	29 1/2	29 1/2
Preferred.....	48 1/2	48 1/2	48 1/2	48 1/2	49 1/2	49 1/2
1st Preferred.....	89	90	90	90	90	90
St. L., Alt'n & T. H.....	68 1/2	68 1/2	68 1/2	68 1/2	68 1/2	68
Preferred.....	99	99 1/2	99	99 1/2	99 1/2	99 1/2
1st mortgage.....	105	105	105	105	105	105
ad mort. pref.....	105	105	105	105	105	105
Income bonds.....	105	105	105	105	105	105
St. L., Iron Mt. & S.....	108 1/2	108 1/2	108 1/2	108 1/2	109	108 1/2
1st mortgage.....	108 1/2	108 1/2	108 1/2	108 1/2	109	108 1/2
ad mortgage.....	108 1/2	108 1/2	108 1/2	108 1/2	109	108 1/2
Toledo and Wabash.....	106	106	106	106	106	106
1st mortgage.....	106	106	106	106	106	106
2d mortgage.....	106	106	106	106	106	106
7s, Consolidated.....	101 1/2	101 1/2	101 1/2	101 1/2	101 1/2	101 1/2
St. Louis Division.....	101 1/2	101 1/2	101 1/2	101 1/2	101 1/2	101 1/2
Union Pacific.....	94 1/2	94	93 1/2	94	94 1/2	93 1/2
1st mortgage.....	113 1/2	113 1/2	113 1/2	114	114 1/2	113 1/2
Land Grant 7s.....	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2	109 1/2
Sinking Fund 8s.....	119	115 1/2	114 1/2	114 1/2	115 1/2	115 1/2
United States Ex.....	118 1/2	118 1/2	118 1/2	118 1/2	118 1/2	118 1/2
Wabash, St. L. & Pac.....	28 1/2	28 1/2	28 1/2	29 1/2	30	28 1/2
Preferred.....	47 1/2	47 1/2	47 1/2	47 1/2	49 1/2	47 1/2
New mort. 7s.....	47 1/2	47 1/2	47 1/2	47 1/2	49 1/2	47 1/2
Wells-Fargo Ex.....	124 1/2	124 1/2	124 1/2	124 1/2	124 1/2	122
Western Pacific b'ds.....	111 1/2	111 1/2	111 1/2	111 1/2	111 1/2	111 1/2
Western Union Tel.....	82 1/2	82 1/2	82 1/2	82 1/2	83 1/2	82 1/2
7s., S.F conv., 1900.....	115 1/2	115 1/2	115 1/2	115 1/2	115 1/2	115 1/2
FEDERAL STOCKS:—						
U. S. 4s, 1907, reg.....	119 1/2	118 1/2	118 1/2	118 1/2	118 1/2	118
U. S. 4s, 1907, coup.....	119 1/2	119 1/2	119 1/2	119 1/2	119 1/2	119
U. S. 4 1/2s, 1891, reg.....	119 1/2	119 1/2	119 1/2	119 1/2	119 1/2	119
U. S. 4 1/2s, 1891, coup.....	119 1/2	119 1/2	119 1/2	119 1/2	119 1/2	119
U. S. 5s, cont'd at 3 1/2.....	104	104	104	104	104	103 1/2
U. S. 3s, reg.....	104	104	104	104	104	103 1/2
Dt. of Col. 3-65s, reg.....	104	104	104	104	104	103 1/2
Dt. of Col. 3-65s, coup.....	104	104	104	104	104	103 1/2

Baltimore Stock Exchange.

Closing Prices for the Week Ending Mar. 5.

Tu. 27. W. 28. Th. 1. F. 2. Sat. 3. M. 5.

Baltimore & Ohio	105 1/4	105	105	105	105
Central Ohio (\$50)	111	108 1/2	108 1/2	108 1/2	108 1/2
1st mortgage, 7 1/2	133 1/4	133 1/4	133 1/4	133 1/4	133 1/4
2d mortgage, 7 1/2	105	104 1/4	104 1/4	104 1/4	104 1/4
3d mortgage, 8 1/2	54 1/4	54 1/4	54	54	54
Northern Cen. (\$50)	55 1/4	55 1/4	55 1/4	55 1/4	55 1/4
2d mort. 6 1/2, 1885	117 1/4	117 1/4	117 1/4	117 1/4	117 1/4
3d mort. 6 1/2, 1900	114	114	114	114	114
6 1/2, 1904, gold	100 1/4	100 1/4	100 1/4	100 1/4	100 1/4
5 1/2, series A	95 1/4	95 1/4	95 1/4	95 1/4	95 1/4
5 1/2, series B	122	122	122	122	122
Pitts. & Connellsv. 7 1/2	51	51	51	51	51
Consol. coupons	48 1/4	48 1/4	48 1/4	48 1/4	48 1/4
10-40 bonds	40 1/4	40 1/4	40 1/4	40 1/4	40 1/4
Def'd Certificates	48	48	48	48	48
New 3 1/2	48	48	48	48	48
City Passenger R. R.	112 1/2	112 1/2	112 1/2	112 1/2	112 1/2

London Stock Exchange.

Closing Prices

	Feb. 9.	Feb. 16.
Baltimore and Ohio 5 1/2, 1927	108	110
Central of N. J., \$100 shares	70	75
Do. consol. mort.	115	115
Do. Income Bonds	88	88
Central Pacific of Cal., \$100 shs.	84	82 1/2
Do. 1st mort. 6 1/2, 1895-98	116	116
Det., G'd Haven & Mil. Equip. bds.	118	120
Do. Con. M. sp. c., till '83 after 6p. c.	117	117
Illinois Central \$100 shares	149 1/2	149
Do. S. F. 5 1/2, 1903	107	107
Lehigh Valley Cons. mort. 1923	115	120
Louisville and Nashville mort. 6 1/2	97	97
Do. capital stock \$100 shares	57	53 1/2
N. Y. Cen. & Hud. R. mort. bonds	130	135
Do. \$100 shares	130	128 1/2
Do. mort. bonds (stg.)	119	121
N. Y. Lake Erie & West. \$100 shs.	38 1/2	37 1/2
Do. 6 p. c. pref. \$100 shares	82	80
Do. 1st Con. Mort. bonds (Erie)	130	128
Do. Do. Funded Coupon bonds	125	122
Do. 2d Consol. Mort. bonds	99	97
Do. Do. Funded Coupon bonds	97	96
N. Y. Pa. & Ohio 1st mort. bonds	57 1/2	53 1/2
Do. Prior Lien bonds (sterling)	103	103
Pennsylvania \$50 shares	61 1/2	61
General Mortgage	122	122
Phil. & Erie Gen. mort. 6 1/2, 1920	115	115
Philadelphia & Reading \$50 shs.	27 1/2	28
General Consol Mortgage	115	115
Do. Improvement Mortgage	105	105
Do. Gen. Mtg. 7 1/4, ex-def'd coup.	97	96
St. L. Bridge 1st mort. gold bond	125	124
Do. 1st pref. stock	92	92
S. P. of Cal., 1st mort. 6 1/2, 1905-6	107 1/2	108 1/2
Union Pacific 1st mtg. 6 1/2, 1895-9	116	116
Wabash, St. L. & P. \$100 shares	31	30
Do. \$100 pref. shares	53	50 1/2
Do. gen. mort. bonds	80	79

QUOTATIONS.

The following quotations of sales of railway and other securities, for the week, are in addition to those given elsewhere in our columns.

New York.—Atlantic and Pacific 1st, 94; American Dock and Imp. 5 1/2, 88 1/2; Boston and New York Air Line pref., 80 1/2; Buffalo, New York and Erie 1st, 1916, 131; Buffalo, New York and Philadelphia 1st, 96 1/2; Chicago and Eastern Illinois 1st, 95 1/2; Cedar Falls and Minne. 50 1/2; Columbia and Greenville pref., 40; Chesapeake and Ohio currency 6 1/2, 53 1/4; do. 1st, series A, 07 1/2; Chicago, St. Paul, Minneapolis and Omaha consol., 107; Chicago, Milwaukee and St. Paul, Wis. and Minn. div. 1st, 91; do. Southern Minn. div. 1st, 105 1/2; Chicago and Pacific West div. 1st, 92; Central Iowa 1st, 108; Columbus, Chicago and Indiana Central inc., 64 1/2; do. reorganization cert., 65; do. 1st mort., Trust Co. cer. sup., 116 1/2; Chicago, Burlington and Quincy, Denver div. 4 1/2, 1922, 83 1/2; Chicago and Northwestern S. F. 5 1/2, 101 1/2; do. Interest bonds, 103 1/2; Columbus, Hocking Valley and Toledo 1st, 80; Denver and Rio Grande, 44; do. 1st, 108; do. consol., 90; Delaware and Hudson, Penn. div. 1st, 123 1/2; Denver, South Park and Pacific 1st, 96 1/2; East Tenn., Va. and Ga., 8 1/4; do. pref., 15 1/2; do. inc., 35 1/2; do. 5 1/2, 73; Evansville and Terre Haute 1st, 97; Fort Worth and Denver, 31 1/2; do. 1st, 66; Gulf, Colorado and Santa Fe 1st, 112; Galveston, Harrisburg and San Antonio, Mex. and Pacific div. 1st, 91 1/2; Hannibal and St. Joseph 6 1/2, consol., 103 1/2; Houston and Texas Central 1st, Waco and N. W. div., 111 1/2; Indiana, Bloomington and Western, 32;

do. 1st, 85; do. consol. inc., 44; do. Eastern div. 1st, 91 1/2; Illinois Leased line, 79 1/2; International and Gt. Northern 1st, 107; do. coup. 6 1/2, 83 1/2; Iowa Midland 8 1/2, 132; Kansas Pacific 6 1/2, Denver div. 1st, 108; do. 1st consol., 99 1/2; do. 6 1/2, 1895, 108; Lafayette, Bloomington and Muncie 1st, 98 1/2; Lake Erie and Western, 29 1/2; do. 1st, 98 1/2; Long Island, 62 1/2; do. consol. 5 1/2, 98; do. 1st, 117; Louisville and Nashville gen'l. mort. 6 1/2, 98; do. N. O. and Mobile div. 1st, 90; Louisville, New Albany and Chicago 1st, 102 1/2; Milwaukee, Lake Shore and Western, 15; do. pref., 44 1/2; do. 1st, 98 1/2; Missouri, Kansas and Texas, 31; do. consol. 7 1/2, 105 1/2; do. ad. 59 1/2; do. gen'l. mort. 6 1/2, 80 1/2; Missouri Pacific, 100; do. 1st, consol., 105 1/2; do. 3d, 111 1/2; Manhattan Beach, 19; Metropolitan Elevated 2d, 81; Memphis and Charleston, 43 1/2; Mobile and Ohio, 26 1/2; do. 1st, 109 1/2; Michigan Southern, S. F., 106 1/2; Michigan Central 5 1/2, 100; do. 8 1/2, 106 1/2; Minneapolis and St. Louis 1st, 119 1/2; do. Iowa Ext. 1st, 113; New York City and Northern gen'l. mort. Trust Co. cert., 46; Nashville, Chattanooga and St. Louis, 58 1/2; New York, Chicago and St. Louis, 12 1/2; do. pref., 28; do. 1st, 97; New York, Ontario and Western, 25; New York, Lackawanna and West. 83; do. 1st, 116; Norfolk and Western pref., 41; New York, West Shore and Buffalo 1st, 75 1/2; New York Central sub. 6 1/2, 102 1/2; Northern Pacific 1st, 103 1/2; New Orleans Pacific 1st, 88; Ohio Central, 11 1/2; do. inc., 27; do. 1st, 88 1/2; Ohio Southern, 11 1/2; do. 1st, 82 1/2; do. inc., 28; Oregon Trans. Continental, 83 1/2; do. 1st, 93; Oregon Railway and Nav., 140 1/2; do. 1st, 107 1/2; Oregon Short Line 6 1/2, 95 1/2; Oregon Imp. Co., 89; do. 1st, 91; Peoria, Decatur and Evansville, 21 1/2; do. 1st, 100; Pennsylvania Co. 4 1/2, 95 1/2; Pullman Palace Car debent., 103; Richmond and Alleghany, 11 1/2; do. 1st, 77 1/2; Richmond, Danville and West Point, 23 1/2; Richmond and Danville, 53 1/2; do. debent., 64 1/2; do. 1st, 94 1/2; Rochester and Pittsburgh, 19 1/2; do. 1st, 104 1/2; do. inc., 43; Rensselaer and Saratoga, 144; Rome, Watertown and Ogdensburg 5 1/2, ext., 72 1/2; do. inc., 42 1/2; St. Paul and Duluth pref., 95; St. Paul, Minn. and Man., 144; do. 1st, 108; do. 2d, 109; do. Dakota Ext. 1st, 108 1/2; South Carolina, 24; do. inc., 57; do. 1st, 102; St. Louis and San Francisco gen'l. mort., 99; do. 2d, Class B, 94 1/2; do. C, 94 1/2; do. Equip., 103; St. Louis and Iron Mt. 5 1/2, 78; do. Cairo and Fulton 1st, 108; St. Paul and Sioux City 1st, 111; do. Southern Pacific of Cal. 1st, 104 1/2; South Pacific of Mo. 1st, 104 1/2; St. Louis, Alton and Terre Haute div. bonds, 72 1/2; Scioto Valley 1st, 93; Texas Central 1st, 105; Texas and Pacific, 39 1/2; do. inc. L. G., 65 1/2; do. Rio Grande div. 1st, 81 1/2; Toledo and Wabash Equip., 80; Union Pacific col. trust, 103; Wabash, St. Louis and Pacific, Chicago div. 1st, 80; do. Gen'l. mort. 6 1/2, 79 1/2; do. Toledo, Peoria and Western 1st, 108; Winona and St. Paul 1st, 107 1/2; Arkansas 7 1/2, L. R., P. B. and N. O., 48 1/2; do. M. O. & R. R., 45; Alabama, Class A, 82 1/2; do. B, 100; Louisiana consol., 73; do. consol. 5 1/2, 98; Missouri 6 1/2, 1887, 108 1/2; do. 1888, 109 1/2; North Carolina 6 1/2, old, 32; South Carolina 6 1/2, Brown consol., 103; do. 6 1/2, non-fund., 5 1/2; Tennessee 6 1/2, old, 42; Virginia 6 1/2, consol., ex-mat. coupon, 58; American Cable, 66; American District Tel., 35 1/2; Mutual Union Tel., 20; do. 6 1/2, 85; Colorado Coal and Iron, 32; do. 6 1/2, 81; Cameron Coal, 16 1/2; Homestake Mining, 15 1/2; Philadelphia.—American Steamship Co. 6 1/2, 108 1/2; Belvidere Delaware 2d, 103; do. 3d, 105; Buffalo, New York and Philadelphia pref., 25 1/2; Central Transp., 34; Cincinnati 7-308, J. & J., 13 1/2; Florida Land Imp. Co., 19 1/2; Huntington and Broad Top Mt. consol. mort. 5 1/2, 86; Norfolk and Western pref., 39 1/2; Northern Central 5 1/2, series B, 95 1/2; Nesquehoning Valley, 51 1/2; Northern Pacific pref. scrip., 86; Pennsylvania and New York Canal 7 1/2, 1896, 120; Pennsylvania Car Trust 5 1/2, 101; Pennsylvania Canal 6 1/2, 85; Pennsylvania Co. 4 1/2, 95; People's Passenger Railway, 10; Philadelphia and Reading adj. scrip., 86; do. scrip., 109 1/2; do. consol. 5 1/2, 1st series, 84; do. 2d series, 66 1/2; do. inc. 7 1/2, 93; do. gen'l. mort. 7 1/2, 102; Philadelphia, Wilmington and Baltimore 4 1/2, 93 1/2; Philadelphia City 6 1/2, 1902, 133 1/2; do. 4 1/2, 1897, 110; do. 4 1/2, 1894, 109; Susquehanna Canal 6 1/2, 70 1/2; Second and Third Streets Passenger R. R., 118; Steubenville and Indiana 6 1/2, 102 1/2; St. Paul and Duluth pref., 94; Thirteenth and Fifteenth Streets Passenger Railway, 75; Texas and Pacific 1st mort. 6 1/2, 103; do. consol. mort. 6 1/2, 94; West Jersey R. R., 50; do. 1st, 124 1/2; West Chester and Philadelphia 7 1/2, 116.

Boston.—Atlantic and Pacific 6 1/2, 92; do. inc., 19 1/2; do. blocks, 103; Atchison, Topeka and Santa Fe 1st, guar., 110; Atchison 4 1/2, 80 1/2; Burlington and Missouri River in Neb. 6 1/2, non-exempt, 104; Conotton Valley 6 1/2, 35

Chicago, Burlington and Quincy 4 1/2, old, 86; do. Denver Ext. 4 1/2, 82 1/2; do. S. W. div. 4 1/2, 79 1/2; Chicago, Iowa and Nebraska, 145; Cincinnati, Sandusky and Cleveland 7 1/2, 103; Detroit, Lansing and Northern, 78 1/2; Dubuque 7 1/2, 104; Flint and Pere Marquette pref., 98 1/2; Great Falls and Conway, 34 1/2; Kansas City, Ft. Scott and Gulf, 75; do. 7 1/2, 112; Little Rock and Ft. Smith 7 1/2, 92 1/2; Mexican Central, 21 1/2; do. 7 1/2, 73 1/2; do. inc., 22; do. Block No. 3, 95; Marquette, Houghton and Ontonagon, 54; Maine Central, 85 1/2; Massachusetts Central 2 1/2; do. 1st 6 1/2, 20; New York and New England 6 1/2, 105; New Mexico and Southern Pacific 7 1/2, 112; Old Colony 7 1/2, 123; Portsmouth, Gt. Falls and Conway, 32 1/2; do. 4 1/2, 83; Republican Valley 6 1/2, 104; Sonora 7 1/2, 103 1/2; Summit Branch, 7 1/2; Toledo, Cincinnati and St. Louis, 4; Toledo, Delphos and Burlington Branch inc., 10 1/2; do. Dayton div. 6 1/2, 40; Wisconsin Central, 24 1/2; do. pref., 31 1/2; do. 7 1/2, 1st series, 81; do. 2d series, 55; Atlantic Mining 14; Franklin, 12 1/2; Huron, 1 1/2; Osceola, 30; Pawabie, 7 1/2; Silver Lake, 5.

Baltimore.—Atlanta and Charlotte, 62 1/2; do. 1st, 107 1/2; Baltimore and Ohio 1st pref., 129; do. 2d pref., 125; Baltimore City 6 1/2, 1890, 114 1/2; do. 6 1/2, 1886, 107; do. 6 1/2, 1900, 124 1/2; do. 5 1/2, 1916, 122 1/2; do. 5 1/2, 1894, 113 1/2; do. 4 1/2, 1925, 111 1/2; Cincinnati 7-308, J. & J., 13 1/2; do. M. & N., 132 1/2; Charlotte, Columbia and Augusta, 29 1/2; Columbia and Greenville 1st, 101 1/2; do. 2d, 78; Canton Co. 6 1/2, gold, 109 1/2; Maryland Defense 6 1/2, 102 1/2; North Carolina 4 1/2, 79; Norfolk Water 8 1/2, 122; Ohio and Mississippi, Springfield div. 1st, 117 1/2; Parkerburg R. R., 9; Richmond and Danville gold 6 1/2, 93; Virginia and Tennessee 8 1/2, 124; Virginia Midland 2d mort., 107; do. 3d mort., 92 1/2; do. 5th mort., 95 1/2; do. inc., 50; Virginia consol. coupons, old, 59; do. 10-40 coupons, 48 1/2; do. old, 59; Western Maryland, 14; Wilmington, Columbia and Augusta, 109 1/2; Western North Carolina, 106 1/2.

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COMMERCIAL DEPARTMENT.

INTERNAL REVENUE REDUCTION.

WE quote in full, those sections of the Tariff Bill lately passed by Congress and signed by the President which relate to internal revenue:

SECTION 1. That the taxes herein specified, imposed by the laws now in force, be, and the same are hereby repealed, as hereinafter provided, namely: On capital and deposits of banks and bankers and national banking associations, except such taxes as are now due and payable, and on and after the 1st day of July, 1883, the stamp tax on bank checks, drafts, orders, and vouchers, and the tax on matches, perfumery, medicinal preparations, and other articles imposed by schedule. A following section 3,437 of the Revised Statutes; provided that no drawback shall be allowed upon articles embraced in said schedule that shall be exported on and after the 1st day of July, 1883; provided further, that on and after May 15, 1883, matches may be removed by manufactures thereof from the place of manufacture to warehouses within the United States without attaching thereto the stamps required by law, under such regulations as may be prescribed by the Commissioner of Internal Revenue.

SEC. 2. That on and after the 1st day of May, 1883, dealers in leaf tobacco shall annually pay \$12; dealers in manufactured tobacco shall pay \$2.40; all manufacturers of tobacco shall pay \$6; manufacturers of cigars shall pay \$6. Peddlers of tobacco, snuff, and cigars shall pay special taxes, as follows: Peddlers of the first class, as now defined by law, shall pay \$30, peddlers of the second class shall pay \$15, peddlers of the third class shall pay \$7.20, and peddlers of the fourth class shall pay \$3.60. Retail dealers in leaf tobacco shall pay \$250, and 30 cents for each dollar on the amount of their monthly sales in excess of the rate of \$500 per annum; provided that farmers and producers of tobacco may sell at the place of production tobacco of their own growth and raising at retail directly to consumers, to an amount not exceeding \$100 annually.

SEC. 3. That hereafter the special tax of a dealer in manufactured tobacco shall not be required from any farmer, planter, or lumberman who furnishes such tobacco only as rations or supplies to his laborers or employees, in the same manner as other supplies are furnished by him to them; provided, that the aggregate of the supplies of tobacco so by him furnished shall not exceed in quantity 100 pounds in any one special tax year, that in, from the first day of May in any year until the 30th day of April in the next year; and provided further, that such farmer, planter, or lumberman shall not be, at the time he is furnishing such supplies, engaged in the general business of selling dry goods, groceries, or other similar supplies, in the manner of a merchant or storekeeper, to others than his own employees or laborers.

SEC. 4. That on and after May 1, 1883, the internal taxes on snuff, smoking and manufactured tobacco shall be 80 cents per pound, and on cigars which shall be manufactured and sold are removed for consumption or sale on and after the 1st day of July, 1883, there shall be assessed and collected the following taxes, to be paid by the manufacturer thereof: On cigars of all descriptions, made of tobacco or any substitute therefor, \$3 per 1,000; on cigarettes weighing not more than three pounds per 1,000, 50 cents per 1,000; on cigarettes weighing more than three pounds per thousand, \$3 per thousand; provided that on all original and unbroken factory packages of smoking and manufactured tobacco and snuff, cigars, cheroots, and cigarettes, held by manufacturers or dealers at the time such reduction shall go into effect, on which the tax has been paid, there shall be allowed a drawback or rebate of the full amount of reduction. But the same shall not apply in any case where the claim has not been presented within sixty days following the date of the reduction, and such rebate to manufacturers may be paid in stamps at a reduced rate, and no claim be allowed or drawback paid for a less amount than \$10.

SEC. 5. That on and after the passage of this act every manufacturer of tobacco or snuff shall, in addition to all her requirements of law, print on each package, or se-

curely affix by pasting on each package containing tobacco or snuff manufactured by or for him, a label, on which shall be printed the number of the manufactory, the district and State in which it is situated, and these words: "Notice.—The manufacturer of this tobacco has complied with all the requirements of law. Every person is cautioned, under penalties of law, not to use this package for tobacco again."

The three last sections of the above relates wholly to the tobacco tax, and the reduction made thereon is considerable. To our way of thinking it is high time the tobacco industry was relieved from the burden of taxation under which it has suffered for many years. The heavy tax upon a commodity in our universal use tobacco invariably results in the production of goods of an inferior quality. The demand for tobacco is certain, and its prices must be moderate. A heavy tax upon its manufacture necessitates the use of poor leaf in order for the makers to realize a profit. While the duty on imported cigars has always been high domestic manufactures have been confronted with almost an equally burdensome tax at home. The poor quality of our domestic segars is due more to this fact than to conditions of growth and diameter. The abolition of the stamp act upon bank checks and notes is of immense benefit in the commercial and mercantile world in labor-saving done regardless to the relief from a constant expense incidental to any business. It is doubtful if the abolition of the tax upon matches will be of material benefit to any one, the price of that commodity being already as low as could be, but, at least, our own field of industry is opened to the public, instead of being almost a monopoly as heretofore. The The perfumery and patent medicine manufacturers have probably cause for rejoicing than the public, who would willingly have let the tax remain upon these luxuries in order to reduce that upon these taxable commodities of greater utility. So far as it goes the reduction of the tax upon domestic products is fairly satisfactory, but it cannot be said to go very far. The ensuing Congress might take up the matter where it has been dropped, and devote a whole session to its further consideration without a waste of time, but unfortunately the two parties will probably have too much to do in "making records" for next year's Presidential election to waste these precious moments in the consideration of the nation's welfare.

Our dependence on Brazil as the great source of our coffee supply is rapidly diminishing. Five years ago Mexico sent us only 6,337,063 pounds of coffee; now she ships annually 17,020,669 pounds; Central America has increased her exports to the United States during the same period from 13,868,955 to 22,449,112.

New York Markets.

Quotations of Wednesday, March 7.

Flour dull and heavy; corn meal quiet and unchanged.

COTTON—Spots fairly active; sales 726 bales; middling uplands, 10 3/4-16c.; do. Gulfs, 10 7/8-16c. Futures slightly lower, closing dull at 10 1/4c. for March, 10 2/8c. for April, 10 3/8c. for May, 10 5/16c. for June, 10 6/4c. for July, 10 7/5c. for August, 10 4/7c. for September, 10 1/8c. for October, and 10 0/8c. for November; sales 66,000 bales; receipts at the ports, 16,720 bales.

PROVISIONS—Lard was depressed, and speculative values favored buyers, in sympathy with dull foreign advices; sales of futures 17,000 tcs., at 11.36@11.37c. for March, 11.16@11.50c. for April, 11.62c. down to 11.57c. for May, for which month the dealings were more active; 11.60@11.62c. for June, 11.63c. for July, and 11.65c. for August, closing at 11.37c. for March, 11.48c. for April, 11.59@11.60c. for May, 11.62c. for June, 11.63c. for July, 11.66c. for August, and steady; lard on the spot fairly active; sales 1,600 tcs. at 11.15c. for prime city, 11.40c. for prime Western; also 500 tcs. refined for the Continent, 11.40c. Pork quiet; sales 200 bbls. at \$19.25@19.35 for mess, and \$19.20 for family. Bacon and cut meats very quiet. City dressed hogs, 9 1/4@9 1/2c. Butter dull and drooping; creameries first and extras, 27@40c.; State dairy, 13@26c.; Western, 12@21c.; rolls, 14@21c. Cheese firm; State factory, 10@14c.; Ohio flat, 8@13 1/2c.; creamery skims, 5@8 1/2c. Eggs in large supply and lower; choice Western, 20 1/2@21; State and Pennsylvania, 20 1/2@21c.; Southern, 19@20 1/2c.; limed, 16@17c.

GRAIN—Wheat lower; export trade fair; spot sales 195,000 bush. at \$1.05@1.25 for red, including No. 2 at \$1.22 1/2@1.23 delivered; steamer do. at \$1.19, and No. 3 at \$1.18 1/2@1.20; \$1.07@1.28 for white, including No. 2 at \$1.07@1.09 1/2, and Canada to arrive at \$1.16@1.19; of options, sales, 3,836,000 bush. No. 2 red at \$1.21 1/2@1.21 3/4 for March, \$1.23 1/2@1.23 3/4 for April, \$1.25 1/2@1.26 1/2 for May, and \$1.25 1/2@1.27 for June. Of malt 10,000 bush. two-rowed State sold at \$1 to arrive. Oats lower; sales 950,000 bush. at 52@55c. for mixed, and 54@59c. for white, of which No. 2 at 52 1/2@52 3/4c. for mixed, and 56 1/2c. for white; also No. 2 mixed at 52 1/2@52 3/4c. for March, 52 3/4@52 3/4c. for April, 52 3/4@52 3/4c. for May, and 53 1/2@53 1/2c. for June. Corn lower; spot sales 190,000 bush. at 71 1/2@72c. for new No. 2 mixed, 63@63 1/2c. for No. 3 do., 69@70 1/2c. for steamer mixed, and 63 1/2@72c. for ungraded do.; 69 1/2c. for steamer white, 71c. for do. yellow; of options, sales 2,080,000 bush. No. 2 mixed at 71 1/2@72 1/2c. for March, 72 1/2@72 1/2c. for April, 72 1/2@72 1/2c. for May, 72 1/2@72 1/2c. for June, and 73 1/2@73 1/2c. for July. After 'Change wheat closed firm; No. 2 red winter, cash, \$1.23 delivered: March, \$1.21 1/2; April, \$1.23 1/2; May, \$1.25 1/2; June, \$1.26 1/2. Corn steady: No. 2 mixed, cash, 72 1/2c., delivered: March, 71 1/2c.; April, 72 1/2c.; May, 72 1/2c.; June, 72c. Oats firm; March, 52 1/2c.; April, 52 1/2c.; May, 52 1/2c.; June, 52 1/2c.

GROCERIES—Rio coffee on the spot was dull and unchanged; options rather weak; 20,750 bags No. 7 sold at 7.45@7.60c. for April, 7.65@7.75c. for May, 7.85@7.95c. for June, 8@8.05c. for July, 8.35c. for October, 8.50c. for December; mild quiet. Rice and molasses in more demand and steady. Raw sugar was firmer at 7 1/16@7 3/16c. for fair to good refining; sales 6,500 bags at 7 1/2c. for San Domingo, and 6 1/2c. for Rio Grande; refined firmer; granulated, 9c.; Standard "A," 8 1/2c.; confectioners' do., 4 1/2c. Tea firm at the sale.

Chicago Grain Markets.

Quotations of Wednesday, March 7.

	9:30 A.M.—Opening.		P.M.—Closing.
Mar.	May.	Mar.	May.
Wheat...	1.14 1/4	1.08	1.13 1/4
Corn....	58 1/2	57 1/2	62 1/2
Oats....	43	42 1/2	44 1/2
Pork....	18.40	18.27 1/2	18.27 1/2
Lard....	11.52 1/2	11.42 1/2	11.42 1/2
S. Bils..	9.90	9.75	9.75

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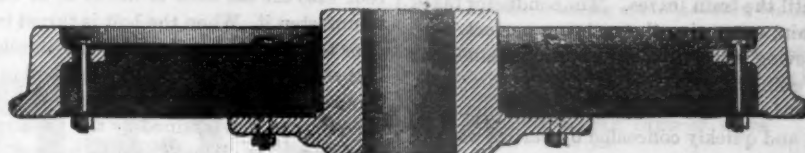
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MISCELLANEOUS.

The Modus Operandi of Car Thieves.

To prevent thieves stealing from railway cars is considered almost impossible. Locks or padlocks, no matter how complicated in their construction, were found wholly useless. The car seal, with some slight difference in its construction, has been adopted and universally used; yet thieving still goes on and is gradually increasing as the car thief improves in practice. An old car thief, who recently gave evidence against other members of the gang, explained the different plans adopted by them in robbing cars.

Before a freight train is "made up" they learn the desired contents of some car, together with its number; and before the train leaves containing this car a yard man goes up one side of the train and down the other to examine the seals, and always reports them "O. K.," but two thieves follow him, and when they come to the desired car carefully cut one side of the seal, remove it, open the door, and one enters; the other closes the door behind him and quietly walks away a short distance and watches the car until the train leaves. The conductor takes the train, supposing the seals are perfect.

Thieving is usually done on heavy trains, and while going up steep grades the thief jumps off. The goods are thrown out at some understood place, and quickly concealed by parties waiting to receive them. When the seals are re-examined the theft is discovered, but the thieves usually have a confederate at the first station where the re-examination is to be made who quickly closes the door of any car that has goods in and with his short ladder conceals the out in the seal by twisting it. A car with a cut seal has been known to start from Boston and run to Sacramento City without its being discovered; seals were reported perfect on every line over which the car passed. A seal examiner cannot get close enough without a ladder, and at night the examination is imperfectly done at best.

Another of their plans was to take a light, strong board into the car. After the goods were thrown out, the door was closed within about a foot. The thief would lay down with his head and shoulders outside in the partly open door, put one end of the board under the car nearly its whole length and on top of the long iron brace that runs under the car lengthwise; across this end of the board they fasten a cleat to prevent slipping off while standing upon it. The thief holds on to the chain-pin and closes the door, adjusts the hasp and pin and conceals the out in the seal by twisting it; then jumps off. The heavy train going slowly up grade, the thief carries off the board with him.

Still another was to board a train while moving up grade. At a convenient place a board would be run under the car on top of the brace and let it stick out two or three feet. He rides on this projection and slowly assumes an erect posture—breaks the seal and enters the car. This was the plan successfully practiced by car thieves on a Missouri railroad, within 50 miles of St. Louis, in the years 1881 and 1882. The

company never learned how or where the thieves boarded the train until they told of it themselves after they were arrested and convicted.

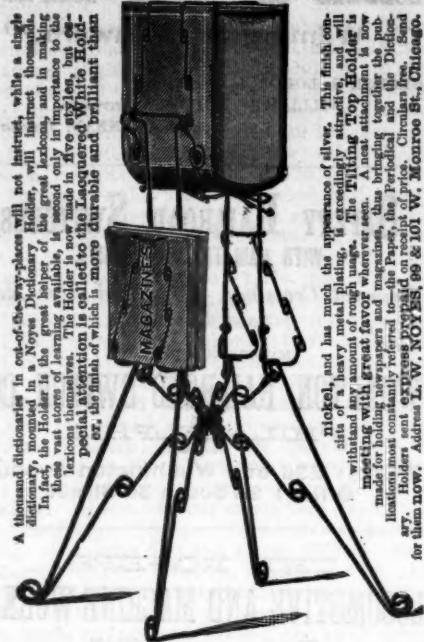
Considerable attention has been directed to the subject, and various plans have been suggested.

The main difficulty appears to be that train men cannot tell when a car is opened, at what time it was opened and at what place, without stopping the train. It is clear to all railroad men, if the seals were placed where the conductor and train men could examine them before arriving at a station, before leaving or while leaving a station, or at any time, place or point upon the road night or day, no theft could be committed from the commencement of a road to its terminus. A device of this character, embodying these desired objects has been invented by James B. Calkins, of Pacific, Franklin County, Mo., and appears in Patent No. 271,475, dated January 30, 1883.

On the roof, half way from each end of the car, a small section of the running-board is converted into a water-tight trap door held in place by hinges; under this door is a hole large enough to introduce the hand and arm to push forward or backward a sliding bolt under the roof into the car door to fasten it, or out of it to unfasten it. When the bolt is thrust into the door to lock it, a small pin passed through the bolt at the arm hole will hold the bolt in place. The seal locks the trap door on top of the car, where it can be examined by the passing trainmen night or day. There is no outside fastenings on the car door of any kind; the fastenings are wholly within the car close under the roof. A car with this fastening cannot be unlocked without first going on top of the car to the center of the running board, cutting the seal, drawing the small pin, pulling the bolt out of car door, then going down the outside to enter.

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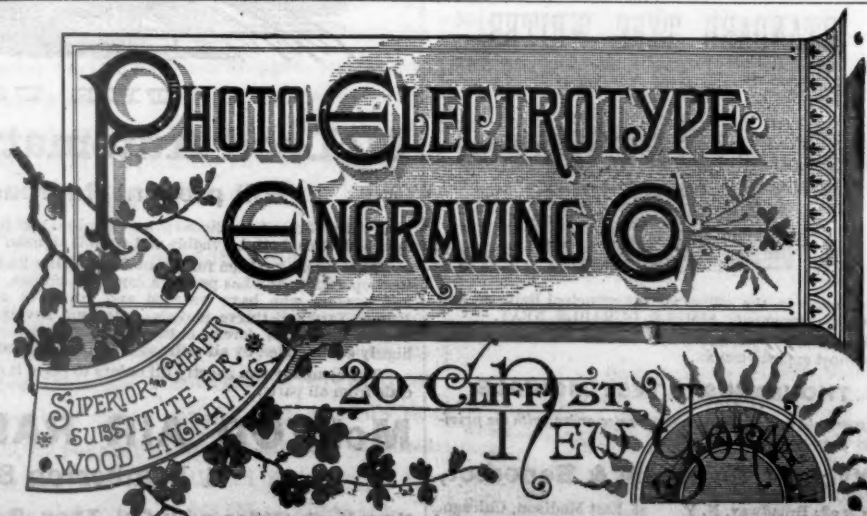
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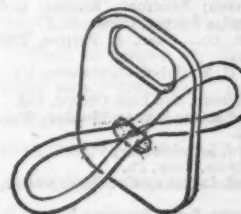
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[This department of the AMERICAN RAILROAD JOURNAL is devoted to the interests of Street Railways; and communications, suggestions and items of information relative to their organization, management and appliances are solicited by the editor. All communications should be accompanied by the name and address of the writer. The English nomenclature of "Tramway" is adopted in this department as being of greater convenience and more specific in its meaning than "street railway," though in allusion to individual organization we shall preserve their corporate titles. It is our hope to nationalize the term Tramway which is now generally used in every English speaking territory with the exception of the United States.]

"TRAMWAY" VS. "STREET RAILWAY" ET ALS.

THE department of the AMERICAN RAILROAD JOURNAL devoted to the interests of Street Railways, will hereafter be designated as the "Tramway Department." This change is not prompted solely by our own judgment, but partly in response to a general demand on the part of street railway constructors and officials, for the introduction of the word "Tramway" in this country. We have no deep rooted predilection for British terms and phrases, and possess enough of that national quality known as "spread-eagleism," to consider the Americans far in advance of their transatlantic neighbors, in the terseness and convenience of their technical terms, but there are exceptions to this general rule, and in the use of the word "Tramway," England sets us an example that we would do well to follow, for "Tramway" is in every sense a more significant, concrete and descriptive appellation than "Street Railway" or any other term of similar purport.

What is known in England and the Continent as a "Tramway," is in America variously designated as a "street railway," "horse railroad," or "surface road," none of these terms conveying an exact or adequate definition. An elevated railway is a "street" railway and yet it is not the intention of street railways, to include it in their own category. A "horse" railroad limits the road to the use of horse traction, which is by no means universal, since many street roads employ steam as a motive power, and cable roads are fast coming into vogue. A "surface" road applies with equal truth to steam as well as to horse power roads, and is entirely without signification. The adoption of the word "Tramway" as a general designation of those organizations, now variously and arbitrarily known as "street railways," "horse railroads" and "surface roads," would obviate all trouble, and at the same time furnish the American people with a concise, brief and easily pronounced term.

It is a mistake to suppose that "Tramway" is a new word. Its use dates back to the early

part of the seventeenth century, when Tramways were used in the coal mines and docks of Northumberland and Durham, long before railways were in existence. The early "Tram" was a simple wooden beam sheathed with iron, this primitive road-bed subsequently giving way to the iron rail, when the word "Tramway" became obsolete until revived by the English for application to the passenger roads in city streets. Its popularity in this connection steadily increased, until to-day it is the general appellation in every country but the United States. With this fact before us it is high time we put aside our conservatism and adopted "Tramway" as the general name of street railway. The John Stephenson Company, one of the largest car building organizations in the world, have long since abandoned the words "horse car" and "street car," and now build "tram-cars," which adequately express their line of industry. Many organizations throughout the country have followed their example and nothing now stands in the way of the general adoption of "Tramway" as a specific designation, but an unreasonable national prejudice. This prejudice we shall strenuously endeavor to overcome, and our first step in this direction is the adoption of the title "Tramway Department." The corporate title of Tramway companies must of course be preserved, and in alluding to them by name we shall give each their proper designation, but in speaking of them generically in either our editorial or news columns we shall invariably apply to them the general term of Tramway. It is our hope that this departure will meet with favor, and that our readers will second the endeavors of the JOURNAL to aid the introduction of a practical reform that is prompted by motives of general utility and common sense.

The Latest Cable Road in Chicago.

THE great importance of the last constructed cable road in Chicago demanding much study, many plans for each important part were devised and patented, the best of which were adopted, some of them having been previously used in San Francisco. The results will be understood when it is stated that to complete two miles of road, consisting mainly of concrete, the following materials were used: 8,000,000 lbs. of iron, 500 tons of steel, 300,000 feet of lumber, 5,000 loads of crushed stone, gravel and dirt, with several barrels of cement to form concrete; 91,945 square yards of pavingstones, 500,000 bolts, 225,000 bricks and 350 cords of rubble; all this to form two tubes, one of which was laid above the other, the top of the uppermost one being about a foot below the surface of the street, making it necessary to excavate the street about three feet. These tubes have iron frames and ribs, about sixteen feet apart, with flanges which

sustain the rails, and the frames forming the slot, the cable going through these tubes (similar, as explained in a newspaper report, to a chain pump) on wheels, and at the end of the tubes over pulleys, from thence into the engine house; first, however, going around wheels beneath the street, the rope being kept taut upon the old English plan—a weighted truck run upon an inclined plane being used for the purpose.

The clutch and break are worked from the middle of the grip car, a separate car having to be run for the purpose. This and the running of long trains are unquestionably the fruitful causes of the many accidents.

No expense was spared, and great efforts made to give it great strength and stability; but its massive weakness is apparent to all practical men. Recognizing this when a cable road was subsequently projected in Philadelphia, a modification was attempted. How much of an improvement it was, may be judged when it is stated that in lieu of all this masonry, concrete, etc., mammoth castings, in sections of 8 feet, weighing about a ton each (nearly 700 tons to a mile), were made. These castings were bolted together in their weakest part. Where several broke in the mere handling whilst laying, what may be expected when they become uneven through settling? Will they not go to pieces—their own weight contributing not a little to that result? Will it not be difficult, if not impossible, to prevent the slot getting out of line?—the least bit being sufficient to impede, if not prevent, the running of the grip.

But even admitting that they would work, and were practicable, why is it necessary to have such immense tubes merely to run a cable of about one and a half inch diameter? It is true that the cable runs and cars are propelled at Chicago, and all the objections of the tram-car are overcome, but all cities are not like Chicago; a straight line on an even plain, with no cross lines, is quite different to cities with undulation, gradients, winding roads and intersecting lines at every street.

The absurdity of the proposed plan of swinging the car around and switching off and on at every crossing, is quite apparent. It would be highly objectionable if it were practicable. As to the momentum depended upon to send the (one) clutch along when the car takes its gyration, to the amusement, no doubt, of the young and giddy (at least as long as the novelty lasts), and the constant terror of the old and feeble, what becomes of it if the car happens to be stopped by a passing vehicle or other cause, just about the time the important movement is to take place? The able-bodied passenger would, perhaps, be depended upon to aid the momentum in such an emergency; but called upon too often, he might object to have his good nature too severely taxed, and be unwilling to pay and, as the sailors say, work his passage too.

In the Hunt system of cable traction, the tube is of cast iron, with movable rolled iron or steel tops, bolted on for convenience of removal or renewal, that being the only wearing part of any consequence. It is laid upon the ordinary cross-ties, and secured by dog-spike

or braces; the very desirable elasticity is attained, as well as great strength; breaking tensile and crushing achieved. Its durability is obvious.

The slot formed by the movable tops is V shape, about $\frac{1}{4}$ -inch at top. Anything entering however tightly, is easily ejected, superior in this respect to the hard, slippery, rigid castings formerly used with the pressure towards the aperture, and forming a very good trap to catch the cork of a horse's shoe and loosen it, if it does not jerk it off entirely, and as likely as not, take the hoof along with it; such catastrophes causing the sportsman, who values a good horse above anything in this world, not even excepting his wife, to use very forcible, if not polite language, and many expletives (unless he happens to be a preacher), and resolve to make the company pay the damages, cost what it might. It goes without saying that these serious annoyances are impossible with the lithe movable tops, whilst the corrugations upon them make the travel as pleasant as upon any ordinary pavement.

This tube has two channels, the upper one conforms to the shape of, and is just large enough for the running of the cable, $\frac{1}{4}$ inches in circumference, and the manipulation of the clutch ($\frac{1}{4}$ inches long by $\frac{1}{4}$ -inch thick), made of steel with arms similar to blacksmiths tongs, jaws and joints being within the channel; certainly the strongest ever devised, they will stand any strain, no obstacle can block them, the harder the pull the stronger they hold. Along the bottom of the channel, at suitable intervals, rollers on pivotal spindles are placed, thus obviating the rapid wear from dirt hitherto experienced. On these rollers the cable is run in any direction—on, on, onward in its monotonous course, no difference how winding or tortuous it may be; quietly, yet vigorously and irresistibly, unlike the one described as going and returning in the same tube on the chain pump principle. It is kept on its circuitous course, making revolution, after resolution ever onward, like the Calvinists' theory of the rewards of the righteous or the punishment of the damned—it has no end.

When the iron hand (the clutch) is not, with its powerful and tenacious hold, grasping the cable, it runs free from and clear of it, thus all wear and tear of the cable is prevented, and it is permitted to go wherever desired upon its rollers, facilitating the crossing of other cable roads, steam roads and bridges, turning curves tauting and tensing the cable, which being done by running the cable below at very little deflection over and under wheels, but small quantity, if any, more power is required. This cannot be done by any other cable system in existence; the grips of which having to be always attached to the cable prevents its relinquishment, or, if at all, very imperfectly, and not without a great deal of trouble.

The lower channel is used for drainage, for which it is admirably adapted; being somewhat larger than the cable channel, and similar in form, it is ample to carry off all water that can enter it through the slot. It can be readily cleaned by flushing it at head of grades, or by rattling through it a small cable with knots or knobs on, to which swabs, brushes or scrapers

can be attached, which soon clear it of all mud and dirt, depositing it in suitable receptacles, provided at proper intervals for it; these can be cleaned out whenever necessary. A trip or two over the road at night of a brushear can keep the road clean; any dirt deposited upon the top of the tube at any time can be easily removed by the brakeman simply raising a lever, which actuates brushes carried upon each car. All water is turned from the slot, the construction of the tube being such as to have that effect, except in times of flood, when it is always troublesome, the most commodious culverts being inadequate to carry it off—an obstruction, this, to the working of the cable road, it may be charged. Not at all; it is viewed much as the good people of Philadelphia regard the advent of a baby in the Almshouse—certainly unwelcome, yet it is no hindrance, could do no damage, and cannot last long. The tubes are firmly and securely joined by fitting the end of one section within that of the other, the movable tops being lapped so that no two joints need ever come together, and effectually preventing the slot getting out of line.

The perfect control and great simplicity of Hunt's system will be understood when it is stated that the brakeman is stationed on the front platform of the ordinary car, no clutch or brake machinery in the middle being necessary; he turns a wheel (like the brake-handle of a steam car) the least bit. This raises the brakes (which bind, at top and sides of the wheels), and simultaneously closes the clutches, clasp the cable securely and without possibility of failure. To better comprehend this movement, imagine two bars, running from end to end of the car, upon each end of which both the arms of the clutches and levers of the brakes are secured. When the brakes are raised the arms are thrown apart, and the clutches close upon the cable. At the same time the car starts, which actuates one or two plungers working into air-cushions, effectually preventing jolting or jerking. Reliance is not solely placed upon these plungers, however; springs may be also used. The clutches are also provided with rollers, which act when the clutches first close upon the cable, but are thrown off when the full force is put on, and they act against the sides of the channel; they are also useful when it is necessary to go slow in a crowded thoroughfare, and when the car is permitted to go down grade faster than the cable to make up lost time. A great desideratum which will be appreciated is, the cable can be run upon different speeds upon the same road, in most cities it being impossible to make as fast time in some parts, owing to the crowded condition of the streets, as in others.

Enough has been said to give an insight into the practical workings of the cable roads, but lest there still be some doubting Thomases (there always are, under any and every circumstance), we submit the following description, by a reliable and competent authority on the spot, as to some of the defects already discovered in the actual working of the Chicago cable. Serious as they are, however, they are small in comparison to those yet to be encountered, when attempts are made to cross it with other cable lines.

The *American Engineer* (Chicago) says, "Mishaps in the shape of ruptured cables and trouble with the grip causes more or less comments and annoyance of the cable road. The trouble of turning street corners is a difficult problem to solve. The cable at those corner turnings is wearing badly and a strand in it frequently gives out. It is an unsolved problem this turning street corners by wire traction, and will necessitate much mechanical ingenuity to overcome the varied opposing elements to a successful issue." Quite right Mr. Editor, but the problem has been solved as is explained in this book, all obstacles are surmounted and all difficulties are overcome.

Having clearly shown this, another matter of moment to city railroad men, and one of much importance, is that the first cost is very much less than any other plan, which will readily be understood from what has been said; it can be run at correspondingly small cost, and it is much more durable. It is simplicity itself, both in its construction and working, and a great triumph of mechanical skill. It is the opinion of prominent city railway officials, whose judgement commands respect, who have given the subject the profound consideration its importance demands, and who have expended much time and money in the vain hope that in the various motors—steam compressed air, &c.—a substitute for horses might be found all of which having proven failures, that motors carried upon the cars would not do on city tramways, and that the only practical system is the cable road perfected.

TRAMWAY NOTES.

Cable traction is shortly to be experimentally introduced by tram-way companies in New York City. It will probably first be tried upon the Tenth avenue road, from Manhattanville to High Bridge. The president of the Third avenue road has thoroughly investigated the Chicago cable road with a view to adopting the plan here. Construction of an experimental road will probably be begun this spring, and if the system proves advantageous it will probably be adopted upon Third avenue. The cable system has also attracted considerable attention in Baltimore, and the corporation counsel of that city has expressed the opinion that the municipal authorities have the power to permit the introduction of cable traction by those tramway companies whose charter does not specify that horse traction shall be employed. We continue this week the discussion of cable traction for tram-cars, and give a description of the Hunt system as employed in the last completed cable road in Chicago. This description is taken by permission from a small pamphlet entitled "Cable Road vs. Horse Car," by Royal Tees, in which the Hunt system is pronounced as the "Cable road perfected."

A MEETING of the stockholders of the new Central Street Railway Co. of Baltimore was held last week to elect directors for the ensuing year. The board has since met and organized. Mr. Welsh, who has been the president since the inception of the road, says the business for the four weeks that the cars have been running

has been larger than they had expected. The company has twenty-six cars, and the start was made with ten. By April 1 every car will be in service, at three and five-minute intervals, with all-night cars later on.

At a meeting of the stockholders of the Sixth Avenue Street Railroad Company, held at the office of the company at Sixth Avenue and Forty-third street, this city, on the 13th inst., the following directors were elected: G. W. Burnham, Jonathan Thorne, T. R. Butler, Abram R. Van Nest, Henry Demarest, William Bryce, William Y. Mortimer, Albert W. Green, Theodore E. Macy, Abijah Curtiss, Charles G. Landon, Samuel Thorne and Henry S. Moore.

THE New York Underground Tramway Company has mortgaged its property and franchises to James H. Fay, as trustee, to secure the payment of debts amounting to \$39,358.53. A judgment foreclosing the mortgage and ordering the sale of the property, etc., was entered in the Superior Court last week.

THE Brooklyn City and Newtown Tramway Company are now running all-night trips and have also put ten new cars on the DeKalb avenue line. These cars are finished in the interior with panels of inlaid wood, and are heated by steam pipes running under the seats.

A DIVIDEND statement of Tramway Companies may be found every week in the preceding pages of the JOURNAL. It shows the amount of stock outstanding, the Dividend Periods, and the date of the last dividend of each organization.

THE tram-car horses are groomed by steam at the Metropolitan Railroad stables, Washington, D. C. Cylinders of brushes revolve against each side of the horse, and the animal comes out well brushed.

A STEEL-WIRE rope $1\frac{1}{4}$ inches diameter, 20,440 feet long, and weighing 51,000 pounds, has been shipped from Trenton, N. J., to San Francisco, for a tram-way railroad.

WORKMEN are laying the steel car rails on the East River Bridge. The iron skeletons of the stations at the termini are nearly completed.

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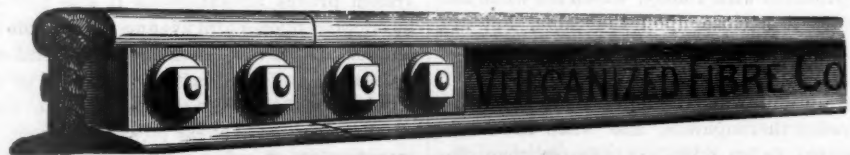
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NEW INVENTIONS.

TO INVENTORS AND PATENTEES.

THIS department is devoted to the notice, consideration and description of new and valuable inventions applicable to Railroads, Steam Navigation, Machinery, Manufactures, Mining and Tramways. New patents of this description appearing in the weekly Official Gazette of the Patent Office are duly noticed in our columns, and full descriptions of those most useful and important are published *free of charge*.

Inventors, Patentees, and the holders of Patents are requested to forward us their claims and specifications, with description of their inventions for our examination with a view to their publication in this department. Descriptive cuts, diagrams, and illustrations of the same are also desired.

In selecting inventions for full description in this department, the editor will be guided solely by their importance and value, and their interest to the readers of the AMERICAN RAILROAD JOURNAL.

A WORD OR TWO OF EXPLANATION.

[We reprint the following from our issue of Feb. 24, and shall keep it standing at the head of this column until the purposes of the Department of New Inventions are fully understood by all our readers].

THE department of New Inventions is conducted in the interests of our readers and of inventors of devices applicable to Railroads, Steam Navigation, Mining, Street Railways, etc. We believe that full descriptions of new and patented appliances of this nature will prove interesting to our readers, and cannot fail to bring the inventor's device into the prominent notice of that class of persons among whom he looks for the heaviest sales and royalties. No charge is made for the insertion of such description in this department, but there is a *sine qua non* requisite in all inventions before we will devote space toward their publication. They must be *new* and *valuable*. It is not our intention to offer a free advertisement to any person, and the inventor whose invention is given full description in the AMERICAN RAILROAD JOURNAL must have produced something of importance and value.

We have not established this department in a spirit of philanthropy, and do not lay claim to any special generosity in publishing descriptions of new inventions free of charge. Our aim is to increase the number of both our readers and advertisers. The continued publication of valuable patents will, we think, attract readers who are interested in the problems connected with railroad and steamboat management, mining, the management of street railways, and the like, while the value of an advertisement in the columns of the JOURNAL will ultimately be apparent to inventors of appliances tending to solve these problems. It is purely a business transaction, and we do not wish inventors to feel themselves under any

obligation to us through our description of their patents. If they choose to advertise or order a number of copies of the AMERICAN RAILROAD JOURNAL containing such descriptions, we would be glad to have them do so, and may possibly ask them for an advertisement or an order, in the form of a fair business proposition, but they are under no obligation to accept our advances. In other words, there is *nothing* obligatory on their part, but at the same time there is nothing obligatory on our part either. We reserve the liberty to ignore any invention whose description is sent us without assigning any reason for such action, and if our opinion and that of the inventor as to the utility of the invention chance to differ, we propose to be guided solely by the former.

The cause of these few words of explanation lies in the fact that many inventors seem to recognize an obligation on our part to describe in full their inventions, while they in return do not feel compelled to go to any expense in order to acknowledge such publication. It would be manifestly impossible for us to publish full descriptions of all inventions of this class, when the weekly list of new patents of the sort numbers fifty or more. Every new invention of the character mentioned above is noticed in our weekly list of patents, and we shall further endeavor to give a brief description of all, but in selecting those for extended notice, we are guided simply by their importance and general utility. Our advertising pages are open at reasonable terms to all inventors and holders of patents, but this department is entirely our own, and we must be pardoned if we choose to conduct it in the manner we deem best. If inventors desire a medium through which valuable inventions of a certain class are brought into public notice free of charge, they will aid us in this direction by subscribing to and advertising in the RAILROAD JOURNAL, but they should do so solely in a practical business way, not influenced by any feelings of obligation, while none exists upon their part so to do, nor upon our part to publish any description that is forwarded us.

List of Patents for Inventions Relating to Railways, Manufacturing, Mining, Tramways, Machinery, Etc.

BEARING DATE OF FEBRUARY 27, 1883.

- 272,849. Lathe: John Birkenhead, Mansfield, Mass.
 272,850. Railroad-Tie: Thomas Breen, Knowlton, Pa.
 272,851. Railway-Signal: Thomas Breen, Knowlton, Pa.
 272,860. Steam-Pressure Gage: Geo. H. Crosby, Somerville, Mass.
 272,861. Shaft-Hanger: Hilen C. Crowell, Erie, Pa.
 272,869. Self-Lubricating Bearing: Thomas R. Ferrall, Boston, Mass.

- 272,879. Valve: Sidney W. Hoag, Sr., New York, assignor of three-fourths to Henry B. Piper, same place.
 272,911. Brake-Shoe: George J. Shimer, Freemansburg, assignor of one-half to Samuel J. Shimer, Milton, Pa.
 272,926. Safety-Valve: Henry C. Wilder, Ashby, Mass.
 272,930. Smoke-Consuming Furnace: Harvey R. Wolfe, Louisville, Ky., assignor to Charles A. Wolfe, Thomas Brennan, W. Garnett Munn, and John Feamy, same place.
 272,947. Clutch: William D. Ewart, Chicago, Ill., assignor to the Link-Belt Machinery Company, same place.
 272,949. Vibrating Propeller: Augustus M. Freeman, Ocean Grove, N. J.
 272,952. Fare-Box: James F. Goodrich, Boston, assignor of one-half to John E. Russell, Leicester, and Alexander Pope, Boston, Mass.
 272,964. Rotary Engine: Mortimer G. Lewis, Lowville, N. Y.
 272,967. Railway-Wagon: John McCullough and William Cook, Glasgow, County of Lanark, Scotland, assignors to William Cook & Sons, same place.
 272,971. Nut-Lock: Joel Moore, Greenwood, assignor of one-half to Walter A. Chappant, Cambridge, Ohio.
 272,974. Collar for Shafting: Frank I. Pearce, Chicago, Ill., assignor to the Link-Belt Machinery Company, same place.
 272,979. Car-Coupling: Wm. N. Richards, Lyons, New York.
 272,987. Traveling Crane and Derrick: John Thompson, Bucyrus, Ohio, assignor to the Bucyrus Foundry and Manufacturing Company, same place.
 273,012. Fire-Pot for Boilers: Edward P. Bates, Syracuse, N. Y.
 273,026. Boiler-Cleaner: Genry A. Chapman, Strawberry Point, Iowa.
 273,029. Nut-Lock for Rail-Joints: Joseph L. Clingman, Cynthia, Ky.
 273,045. Car-Coupling: Chas. M. Ezell, Baskinton, La.
 273,051. Dumping-Car: Laurence Fitzsimmons, Allegheny, Pa.
 273,053. Car-Brake: Edward Foakes, Cardiff, England, assignor to George Hopkins, same place.
 273,081. Tightening Device for Belt-Pulleys. Noah W.
 273,084. Feed-Water Heater: John J. Hoppes, Springfield, Ohio.
 Holt, Buffalo, N. Y.
 273,099. Steam-Boiler Furnace: Frank H. Kane, Riverside, assignor of one-half to William Kruse, Sedamsville, Ohio.
 273,104. Car-Coupling: Henry Keller, Corpus Christi, Tex., assignor of one-half to George K. Page, same place.
 273,112. Railroad-Crossing: David Lippy, Mansfield, Ohio, assignor of two-thirds to Thomas Huber and William Huber, same place.
 273,126. Steam-Engine: Henry Monk and William Monk, Hadlow, Quebec, assignors of one-sixth to John A. Seward Dunscomb, Quebec, Canada.
 273,141. Stock-Car: Samuel Pavay, Detroit, Mich., assignor of two-thirds to Wm. K. Muir and Allen P. Cameron, same place.
 273,148. Car-Coupling Link: John W. Purlow, Durango, Col.
 273,155. Car-Step: Harry C. Reagan, Jr., West Chester, Pa.
 273,158. Lubricator: J. Vincent Renschard, Windsor, Ontario, Canada.
 273,162. Rotary Engine: Charles M. Sanderson, Winchendon, Mass., assignor of one-half to George N. Goodspeed, same place.
 273,167. Car-Coupling: Albert T. Schultz, Zanesville, Ohio.
 273,171. Steam-Engine: John B. Shaffer, Kearney, Nebr.
 273,197. Life-Boat: Frank Vaughan, Elizabeth City, N.C.
 273,214. Railway-Brake: John Woods, Melbourne, Victoria.
 273,218. Signal: Joseph H. Bacon, Charlotte, Mich.

RE-ISSUE.

- 10,291. Car-Coupling: Clinton Browning, Shousetown, assignor of one-half to Lindsey & McCutcheon, Allegheny; said Browning and Lindsey & McCutcheon, assignors to James H. Lindsey, Trustee, Allegheny City, Pa.

Car-Coupling.

COLUMBUS B. TUCKER OF ANGERONA, W. VA., AND
JOSEPHUS TUCKER OF COOLVILLE, O., PATENTEES.

THIS device is an automatic self-coupler without spring or lever, and consists of a draw-head with a beveled opening, and with a small socket at the rear and upper end of the main socket in which to insert the coupling link, raising its projecting end to meet the draw-head of the approaching car. The coupling is also furnished with an upright tube in which to place the coupling-pin, to which a small chain is attached extending to the top of the car, and under this tube a perforated slide is placed in such a manner that at the contact of the draw-heads of two cars, the pin drops automatically in position. The object of the invention is to avoid the necessity for train men to stand between cars in coupling them, and thus expose themselves to injury, while at the same time cars using the device can be readily coupled to others using the ordinary coupling link and pin.

Valve-Gear.

RUDOLPH M. HUNTER OF PHILADELPHIA, PA.,
PATENTEE.

THIS invention has reference to valve-gear for steam-engines; and it consists in a combination of spur-wheels in gear with a pinion on the crank-shaft and adapted to reciprocate the valve-rod; further, in the arrangement of such gear mechanism with means to so alter the positions of the parts with relation to each other that the engine may be reversed or the point of cut-off changed. The object of the device is to dispense with the usual and expensive link-motion and eccentrics, and substitute therefor a simple and equally efficient spur-wheel mechanism, thereby greatly reducing the cost of manufacture. This improvement is particularly adapted to portable and traction engines used for operating farm machinery. The valve-gear is now being manufactured by Frick & Co. at Waynesboro, Pa., the capacity of whose works is estimated at 1,000 engines per year. They are using the device in preference to link-motion.

Drilling Apparatus.

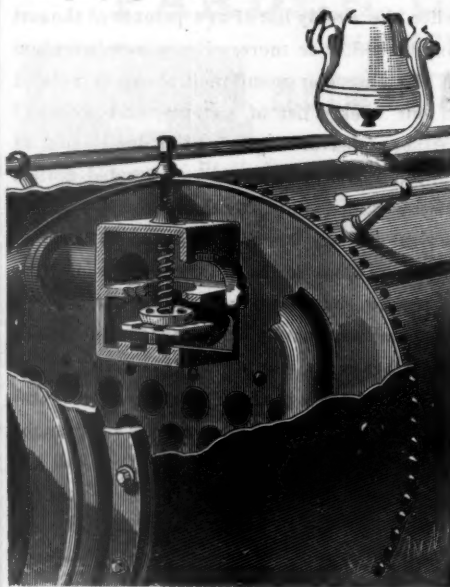
WILLIAM L. SAUNDERS OF JERSEY CITY, N. J.,
PATENTEE.

THIS invention consists of a tube or hollow cylinder of two or more telescoping sections, surrounding a steel drill of the construction commonly employed for submarine work. The lower section is provided with a conically tapering extension, which in turn is united with a straight tube having an internal diameter preferably slightly exceeding that of the hole formed by the drill. Within this tube and parallel with the shank or steel of the drill extends a small pipe, terminating above the bit of the drill, and arranged to convey a continuous stream of water thereto. At a suitable distance above its lower extremity the conically tapering sec-

tion is provided with a lateral opening, through which the debris accumulating within the lower extension is discharged. The means for effecting this discharge consist of a suitable steam or water pipe extending downward along the inclosing cylinder or tube to the conical section thereof, into which it enters, terminating in a nozzle concentric with the discharge-opening, and constituting a device known as an "ejector." By forcing a jet of steam or stream of water downward through this pipe and out of the discharge-opening the water received through the pipe terminating at the bit of the drill and the accumulations forced by the same into the conical section will be carried out through the discharge-opening.

The Higdon Traction Governor.

THIS device is the invention of J. C. HIGDON, of Kansas City, Mo., and is designed to prevent the slipping of locomotive driving wheels. It consists of placing in the steam pipe of a locomotive what may be termed a "check" valve, which closes automatically by the excessive flow of steam when the driving wheels slip upon the rails. This valve may be located at any point in the steam pipe, but preferably at the fork in the smoke box as shown in the accompanying illustration.



The valve is constructed of the same area as the throttle-valve, and is connected with the throttle-lever, thus insuring a simultaneous action with that of the throttle. This connection is made by a rod running through the dry pipe, the valve end being jointed to a wedge which works in guides cast in the valve chamber, and this rod is so attached at its other extremity that when the throttle is opened, the wedge is proportionately withdrawn, lowering the table on which the valve rests, while closing the throttle causes an opposite effect upon the table. The connection may also be made by running the rod outside the boiler, combining with a bell-crank and a shorter rod extending through a hollow screw, the manner of connection being more a question of preference than of importance. The valve is pressed down on the table by a spring as shown in the illustra-

tion, which is adjusted by a screw extending out through the valve chamber and boiler shell, and the pressure of the spring upon the valve is of about the same force as that exerted by the steam on the lower side, so that the valve will always be in comparative equilibrium. As a result, when any undue rush of steam takes place, the valve closes automatically, checking the flow of steam to the steam chests, and consequently the slipping of the driving wheels of the engine is prevented. After this end is accomplished, the valve opens instantaneously by reason of the pressure of steam which passes up through the valve openings, making the pressure in the cylinders the same, or nearly the same, as that in the dry pipe. The valve should be made as light as is consistent with the strength required to withstand the steam pressure employed. The Eastern agent of the Higdon Traction Governor is L. M. Shute, of 311½ Walnut street, Philadelphia.

A New Globe Valve.

GEORGE REIMANN, of Quincy, Ill., has invented a new and useful improvement in globe valves, upon which letters patent have been granted him. His invention has for its object the production of a globe valve both air and steam tight, and having the capacity for the removal of these special parts which are the most exposed to wear without the necessity of renewing the remaining parts. Its advantages to manufacturers and others using steam, water or other liquids, both as regards the saving of time and expense, are marked. Many experts have given the opinion that the new globe valve is a great improvement upon all precedent contrivances of the same nature, and that when once it becomes known, it will take the lead in preference to all others.

In this ingenious improvement the shell or case of the valve has a horizontal portion provided with threaded ends, by means of which connection is made with adjacent pipe-lengths, and the vertical portion of the shell or case has a plain interior surface, excepting at the upper end, which is threaded. A thimble fits snugly within the said vertical portion, which is provided upon each side with an opening which coincides, when the thimble is in place, with the space in the horizontal portion of the case or shell, which is provided for the passage of the steam. A projection upon the exterior surface of the closed bottom of the thimble is provided with screw threads, and a screw-nut is adapted to engage with the threads for the purpose of drawing the thimble tightly into the casing and holding it securely against vertical movement. A ring has vertical projections which fit into corresponding recesses in the upper edge of the thimble and the horizontal projections before described. By means of the vertical projections, the ring is so united to the rigidly held thimble as to be incapable of a revolving movement. By means of the horizontal projections a plug or finger, to be hereafter described, is also held against revolution. This plug or finger consists of a conical block which is provided with an internal left-handed screw-thread and with an external recess which extends in a vertical direction. When this plug or finger is in

position its recess coincides with the horizontal projections of the ring before described, so that it is accurately guided in its vertical movement. A cap, resembling a hollow cone in its general form, is provided below with screw-threads adapted to engage with the screw-threads upon the upper end of the vertical portion of the casing, and at its upper end, in its interior space, with a bearing shoulder and screw-threads. Next, a screw-stem consisting of a rod having at one end a threaded portion is adapted to engage with the corresponding part of the plug or finger described above, and at the other end, with the usual handle-wheel. A shoulder near the center of the rod referred to in the last sentence, is adapted to bear upon the shoulder of the cone-shaped cap described above, when the parts are in place. The invention is completed with the addition of the usual threaded sleeve or collar of the screw-stem, by means of which the opening into the top of the cone-shaped cap is closed.

From the above account of its various parts, the expert will understand quite readily the operation of the invention. By turning the handle-wheel the bearing shoulder of the stem is made to revolve upon the bearing shoulder of the cap. By the revolution of the threaded portion of the stem the threaded plug or finger, which is held against revolution by the extension of the horizontal projection of the guiding ring into its recess, is caused consequently to travel in a longitudinal direction to open or close the passage-way through the cock. By simply grinding together the interior surface of the thimble and the exterior surface of the plug an air and steam tight joint can be obtained. By grinding together also the exterior surface of the thimble and the interior surface of the vertical part of the shell or case of the valve, a tight joint may be obtained. This thimble and plug also may be readily replaced when worn, without renewing the other parts.

The following are among the best features of the invention: It provides against the need of disconnecting the valves from pipes in case of leakage caused by wear or otherwise, as those parts (the thimble and finger) which alone are exposed to such wear, may be renewed at any time without the renewal of the remaining parts, thus putting the whole in a shape as good as new. Owing to the thimble and finger being entirely independent of the outer shell or casing, this may be manufactured of malleable iron, thus greatly reducing the cost of material. Lastly, the finger being ground together with the interior surface of the thimble, an entirely air and steam tight joint is obtained.

Persons interested in the above brief description, should communicate with the patentee, addressing him as in the first sentence of this article.

SEVERAL experiments were recently made in the workshops of the Northern Railway of France at Paris on the system of Marcel Deprez, for transporting electrical force over great distances. A dynamo-electric machine transported a force equal to about three horse power a distance of twenty kilometres by means of a single ordinary iron wire, and afterward ten horse power over a distance of thirty-five kilo-

metres. A kilometre is 3,280 feet. Hitherto it has not been thought possible to transport a force beyond two kilometres with a minimum loss of fifty per cent, though thick copper wires were used as conductors. Many eminent persons attended the experiments, among them M. de Freycinet, himself a distinguished engineer.

An automatic electric mechanism that is designed to announce the approach of railroad trains has been tried on what is called the Paris-Lyon-Mediterranean line. It consists of a box filled with mercury placed under the rail at the required distance from a bell. When a train passes over this box the mercury is so agitated as to form contact with the wire communicating with the bell, and thus make it ring.

Messrs. JOHN B. DAVIDS & Co., of New York, have just succeeded in perfecting a chemical writing fluid, in which, while the parts are in perfect combination, the specific gravity is but $3\frac{1}{2}$ degrees or $1\frac{1}{2}$ degrees less than that of Messrs. P. & J. Arnold, of London, England, which, heretofore, has been considered the most limped writing fluid produced.

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TO INVENTORS

—AND THE—

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Parties having New Patents of any description, which promise to be of value to the Railway trade, are cordially invited to correspond with the undersigned. My practical experience in all details of the trade enables me to judge promptly whether new patents really deserve to be classed among the improvements or not, and advice will be freely and frankly given in every case. When found to possess real merit I will be pleased to assist the inventor or owner in bringing the articles into use.

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SAWS AND FILES.

THE UNRIVALED PRODUCTION OF THE E. M. BOYNTON SAW AND FILE COMPANY—THE RECENT RE-ORGANIZATION.

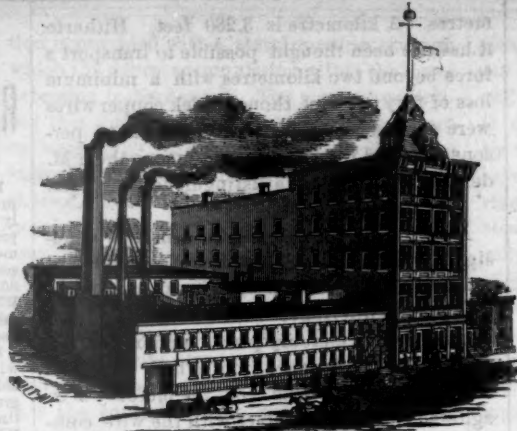
For a good many years past few manufacturers have been so well or favorably known in their respective lines of business as Mr. E. M. BOYNTON, the saw manufacturer, in his. The saws and files, etc., made by him are regarded by experts as superior to anything else of the kind made in any part of the world, and the demand for them has been rapidly growing. On January 1 a re-organization of the concern occurred, a joint stock company being formed under the style of the E. M. Boynton Saw and File Company, with the following officers: E. M. Boynton president, O. W. Boynton vice-president, D. Farrington secretary, and T. B. Cummings, treasurer. The office and warehouse remain at the old address at 80 Beekman street, and the factory, an engraving of which is annexed, is in Brooklyn. This factory is probably the most complete establishment of its kind in the country. It can turn out more than one thousand saws per day. The company control fifteen of the most valuable patents ever taken out upon saws. One of the great specialties is the patent "Lightning" law, patented in 1876. It has what are called "M" teeth. The patent M teeth being double, with one dress and set, cut only with outside edges, one blade follows while the other is cutting, and vice versa. As the saw is drawn back and forth, meeting the fibre direct at an opposite angle from the old V tooth, the fibre is cut off by a forward and upward motion; the cutting is mechanical, inevitable, steady and uniform. In practical use the following advantages are observed: 1st. Simplicity in sharpening. No shortening required—all teeth double M cutting clearer. 2d. A cutting edge. The file is only used to dress teeth

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The 12-inch log at bottom of this picture was sawed off by two men by hand in 7 seconds before Commissioners of every country and the Emperor of Brazil.



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edge being given with whetstone—saving of friction, as well as files, steel, strength and time. 3d. Double teeth—are stiffer, less vibration. 4th. Consequently, may be and are gummed longer, saving expense and frequent repairs. 5th. Are stronger than any other. 6th. Direct cutting (upwards) avoids grit, divides resistance, relieves the pressure and wear on point of teeth—avoiding the grinding, weighing and clogging of old style saws. 7th. No waste of power, as in the old scratching system, the cutting being direct, uniform, economical and continuous. 8th. In direct cutting, edge holds longer than if dragged over the timber. 9th. It is the front cut of the hand saw cutting both ways. 10th. This saw cuts with less friction, much easier and faster than any heretofore known, while more simple than any other patent saw. The "Lightning" combines the two principles in one tooth. One point of M follows while the other is cutting, which regulates the feed, and enables the teeth of the plow or vertical form to be used for both cross cutting and slitting. This patent tooth is as simple as any hand-saw tooth to sharpen. Boynton's saws were effectually tested before Judges at the Philadelphia Fair, July 6 and 7. An ash log, eleven inches in diameter, was sawed off, with a four foot "Lightning" cross-cut, by two men, in precisely six seconds, as timed by the Chairman of the Centennial Judges of Class 15. The speed is unprecedented, and would cut a cord of wood in four minutes. The representatives of Russia, Austria, France, Italy, Spain, Belgium, Sweden, England and several other countries were present, and expressed their high appreciation. Many of the leading saw manufacturers of the world were present, but not one accepted Mr. Boynton's \$1,000 challenge. The M principle is applied to saws of various kinds and for all sorts of purposes. In consequence of the practical value of the patents taken out by Mr. Boynton the earnings of the factory have multiplied fivefold in five years, and there is no doubt that an even more rapid growth will be recorded in the future.—*New York Scientific Times and Mercantile Register*, Feb. 3, 1883.

This Company also manufactures the **Noon-Day Stove Polish**, so rapidly coming into favor.

